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THE ADDRESS IN OBSTETRICS.

A BRIEF REVIEW OF THE GROWTH OF McDOWELL'S OPERATION DONE AT DANVILLE, KENTUCKY, IN 1809; ITS PRESENT STATUS.

Delivered Wednesday, April 29, 1885.

BY R. S. SUTTON, M.D., LL.D.,
OF PITTSBURG.

IN the bleak cold of a December day, in 1809, a woman riding on horseback, arrived in Danville, Kentucky. She had taken farewell, perhaps forever, of relatives and friends, and had just completed a journey of sixty miles that she might be near a surgeon, who had promised to open her abdomen, and attempt to remove the large ovarian cyst it contained. She was to be the subject of an experiment—an experiment at the hands of a surgeon living on the borders of civilization—an experiment which would involve her life, and to which she must submit without the blessing of chloroform or ether. This woman possessed of marvellous courage, was Mrs. Crawford, McDowell's first patient in ovariotomy, and the first patient upon whom the operation was ever deliberately undertaken. She recovered and lived to the advanced age of seventy-nine years, a period of thirty years beyond the operation.

The conditions surrounding, and forming part of this operation, are worthy of more than a passing notice. At the present time, they are declared by the ablest operators to be of more than accidental importance.

In the light of all recent advances concerning the environs of an ovariotomy patient, I ask you to listen thoughtfully, and inquire of yourselves: Have modern operators had better environment than McDowell? Is their quarantine better than his was? Whether accident, or necessity, or the simplicity of border life, provided these conditions so favorable to recovery, your orator will not inquire, but hopes to show that McDowell did operate under conditions as favorable as does Dr. Keith or Mr. Lawson Tait.

1st. The patient was refused operation in her own home.

2d. She was operated upon in Dr. McDowell's own house.

3d. History mentions but one assistant present at the operation.

4th. The patient had never been tapped.

5th. We may safely infer that the room in which the operation was performed, contained, at this early date in Kentucky, no superabundance of furniture or upholstery.

6th. That the room was ventilated by an open fireplace is more than probable.

7th. The atmosphere was that of a healthy border town.

8th. No sponges were introduced into the abdomen.

9th. He ligated the pedicle and dropped it in.

This operation will stand the criticism of the most exacting specialist of the year 1885, save in two particulars: viz., the ligature was not carbolized or scalded, the ends of it were left hanging out of the lower angle of the wound, and merely turning the woman on her side to permit all fluids to escape from the cavity of the abdomen was scarcely enough in that direction.

The incision was made to the left of the rectus muscle, but in his next case McDowell made it in the linea alba, between the umbilicus and pubis.

Pause a moment! Think; at the end of almost three-quarters of a century, the operation stands almost where McDowell left it, with one solitary exception, viz., the ends of the ligature surrounding the pedicle are cut short.

Restless human nature, not satisfied, sought other means of treating the pedicle, a review of which is fraught with good instruction. For eleven years the operation remained in the hands of McDowell, and he adhered to ligation of the pedicle, leaving the ends of his ligature hanging out at the lower angle of the wound. In 1820, Chrysmar, of Würtemburg, tied the pedicle in two portions, leaving the ends of the ligature hanging out at the lower angle of the wound. In 1821, Nathan Smith, of New England, tied the pedicle with "strips cut from a kid glove;" he cut the ligature off close to the knots, and dropped the pedicle into the abdominal cavity.

Neither Chrysmar nor Nathan Smith knew anything of McDowell's operations. Were the teachings of Hunter and John Bell working upon other minds, as well as upon the mind of Dr. McDowell? The last named sent to Mr. John Bell, of Edinburgh, an account of his cases. Mr. Bell being then in Italy, his colleague, Mr. Lizars, received the report. It is probable that this record was received in 1818. For six years Mr. Lizars kept it to himself. He attempted ovariotomy four times, and succeeded in one case, the patient surviving the operation seventy days. In one case he opened the abdomen by an incision reaching almost from the ensiform to the pubis, and thrust his hand into an empty belly. He requested every one of his students to put his hand into the abdomen, and finally exclaimed, referring to an army officer present, "Where is the military gentleman?" and had him make the same manual exploration. Mr. Lizars then closed the wound, *and it healed by first intention.*

Owing to the fact that Mr. Lizars's results were bad, twenty years elapsed before ovariotomy was again attempted in Scotland. In 1845, Dr. Handyside performed it. Another halt of seventeen years occurred, bringing us up to 1862, at which date but one success had been attained in Scotland. In that year Dr. Thomas Keith did his first operation.

Let us now cease the pursuit of Dr. McDowell's operation, as it was reported to Mr. John Bell, which report the latter did not live to see.

Up to the year 1843, I find the records of only eighteen completed ovariotomies in America. In this year, Dr. Alexander Dunlap, of Springfield, Ohio, and Dr. John L. Atlee, of Lancaster, Pa., did their first cases, the latter removing both ovaries. Eleven years later (1855), Dr. Kimball, of Lowell, began operating. These three are now the only living pioneers of the army. May they live long to enjoy the distinction!

The operations in the United States were already numerous, and the stability of the operation secured. This was before Sir Spencer Wells did his first ovariotomy.

It is estimated by Peaslee that up to the last quarter of 1863, over three hundred ovariotomies had been done in this country. At this date, Dr. Keith was only beginning in Scotland; the operation was performed for the first time in Russia, and was only a year old in Italy. Twelve years after the death of Dr. McDowell, in 1842, Dr. Charles Clay of Birmingham, England, did the first operation in that country; prior to this time, Jeaffreson, Walne, King, and West had each removed, by abdominal section, parovarian cysts. In 1851, Baker Brown began operating in St. Mary's Hospital, London; his results were not good, and the intense opposition of his colleagues drove him from the hospital; he then founded "The London Surgical Home," where his results compared favorably with those of any other surgeon of his time. *It was mainly due to his action that the practice of performing ovariotomies in large hospitals, where isolation is impossible, ceased.*

From Baker Brown, Nélaton learned the operation by personal observation, and returning to France, related, in a public lecture, how he had seen Brown do five cases, three of them in a single day; and thus through the influence of Brown on Nélaton, the opposition to ovariotomy in France was largely diminished. In 1854, Baker Brown taught Sir Spencer Wells the operation, and in 1857, Sir Spencer did his first operation. In 1864, according to Sir Spencer Wells, the operation was completely established in London, and, we may add with pride, in every country in the civilized world.

But while the surgical world recognized the operation, there was a diversity of opinion with regard to the treatment of the pedicle. From the date of Dr. McDowell's first operation up to 1821, when Dr. Nathan Smith operated, the ends of the ligature were brought out at the lower angle of the wound; Dr. Smith was the first to cut the ends off. For sixteen years afterwards no other method was offered. In 1837, Stilling, of Cassel, in the province of Hesse-Nassau, Germany, used the cautery, and suggested stitching the pedicle to the wound.

Nine years barren of new suggestions again elapsed, when, in 1846, Dr. Handyside, of Edinburgh, Scotland, carried the ligatures through the cul-de-sac of Douglas into the vagina. In 1848, Stilling treated the pedicle outside of the peritoneal cavity. Two years later, in 1850, this method was inaugurated in London by Mr. E. W. Duffin. The introduction of the extraperitoneal method of treating the pedicle by Stilling, in 1848, began a long and serious conflict which has happily died out with the method. Maisonneuve, of Paris, in 1849, had twisted the entire pedicle in one case, and Martin, of Jena, had stitched the pedicle to the wound. About this time Langenbeck stitched the pedicle to the wound, and covered it with skin from the margin of the incision.

Eight years later, in 1850, Dr. John L. Atlee, of Lancaster, Pa., introduced the écraseur to divide the pedicle. He was imitated by a number of prominent operators, notably by his brother, the late Washington L. Atlee. Sir Spencer Wells, Dr. Keith, Professor Pope, of St. Louis, U. S., and Professor Billroth, of Vienna. This year proved unfortunate for the operation, for during it Mr. Johnathan Hutchinson invented the clamp which perpetuated the extraperitoneal mode of treating the pedicle. In 1860, Sir James Y. Simpson secured the pedicle within the cavity of the abdomen by acupressure needles passed through the abdominal wall. About 1865, Koeberle, of Strasburg, invented his serre-nœud, or wire constrictor, with which he grooved the pedicle prior to applying the ligature.

In 1864, Mr. I. Baker Brown, of London, reverting to Stilling, of Cassel, established the use of the cautery, *a method rejected in London, taken up by Dr. Keith, and now credited through him with the best statistics yet attained by any operator.* In 1868, Masslovsky, a Russian, amputated the pedicle by double flaps, one on each side, and stitched the flaps together. In 1869, Dr. McLeod, of Glasgow, Scotland, by means of two pairs of strong forceps, twisted the pedicle entirely off. During this year, Dr. Peaslee invented a scabbard and knife by means of which the pedicle was secured, the ligature traversing the scabbard. After forty-eight hours the ligature was cut by introducing the knife into the scabbard, when both ligature and scabbard were withdrawn. In 1870, Dr. Thomas Addis Emmett reported eighteen cases in which he had secured the pedicle by means of silver wire.

Up to the present year (1885), every conceivable thing has been done with the pedicle. It has been tied entire; tied in sections; been twisted off; burnt off; crushed off; cut square off; cut off in flaps; left inside; left outside, and been made to slough off. The extraperitoneal method of treating the pedicle is gone. The question is now resolved into the merits af the ligature cut short, the Dr. Nathan Smith method, or the clamp cautery, as introduced by Mr. I. Baker Brown, of London, in 1864. If the clamp as devised by Mr. Jonathan Hutchinson was a bad instrument, and according to Mr. Tait, reduced the statistics that Sir Spencer Wells should have attained, it must have similarly affected the results of those who have employed it in the United States. Recently ligation and the cautery have given almost equal results.

The operation of Dr. McDowell in so far as it relates to the treatment of the pedicle, is, therefore, triumphantly where he placed it, despite the ingenuity of the surgical world, having undergone but a single alteration, namely, Dr. Nathan Smith's improvement of cutting the ligature short I have not been able to learn anything as to the extent sponges were used by the pioneer operators. When Dr. Keith was about to do his first operation, he had the water to be used boiled the night before, and he made everything scrupulously clean; during the operation he was surrounded by old practitioners.

After removal of the cyst, he thrust a big sponge into the abdomen, and brought it out full of fluid. As he was about to repeat this, one of the doctors seized his

arm, and exclaimed, "For God's sake don't do that again." While he hesitated, the others argued that any fluid left in the body would be a nice protection to the intestines. He closed the wound. Subsequently the patient did badly. He at once opened the wound and let out a pint of dirty fluid, and the patient recovered. From that time he advocated careful sponging after the operation, *and he was the first to insert a flat sponge under the wound while the stitches were being placed.* Koeberle, who also began to operate in 1862, *introduced the compression forceps and drainage, first by short and later by long glass tubes.*

I here show you the Baker Brown cautery clamp, used by Dr. Keith, the compression forceps of Koeberle, *also the modification by Sir Spencer Wells*, and the drainage-tubes so much in use by operators in Great Britain.

The technique of McDowell's operation is, probably, complete, *and its future will depend on the subject, the place of application, and the care taken to protect the patient from extraneous sources of danger.* It may be compared to a mighty oak, each decade of years having added to its greatness until its far-reaching branches furnish shelter for the thousands of men and women who require abdominal section. Its ramifications are hysterectomy for fibroids, hepatotomy, cholecystotomy, normal ovariotomy, the Hegar-Tait operation for the removal of both ovaries and tubes, nephrectomy, exploratory incisions, gastrotomy, and enterotomy. It still continues to grow, and the task of pointing out the leaves that have been added to its foliage during the last year requires our efforts ere they fall about the roots and contribute themselves to the growth of the parent tree.

Valuable lectures and papers have been given by Dr. Keith, Mr. Lawson Tait, Mr. Savage, Sir Spencer Wells and Mr. Bryant, all in the *British Medical Journal.*

The results of valuable experiments on lower animals have been published by Prof. C. T. Parkes, of Chicago. Many successful cases of the Hegar-Tait operation done by our countrymen, and the surgeons of Great Britain, have been published in various journals.

Mr. Thornton has been successful in gastrotomy for the removal of a large foreign body, and has had seventeen successful cases of nephritic surgery, ten of these being nephrectomy by abdominal section. Drs. Keith and Bantock continue to do supravaginal hysterectomy with unparalleled success, and it is premised that, if their success continues, it will elevate their method of operating beyond the reach of controversy. They both adhere to the extraperitoneal treatment of the stump, while the continentals practise the intraperitoneal method.

The recent visit of Mr. Lawson Tait to the United States, has given a great impetus to the Hegar-Tait operation for the removal of diseased tubes, and for the removal of ovaries and tubes for the cure of fibroids of the uterus.

For the purpose of encouraging the conservative abdominal surgeons, *those who look carefully to the environment of their patients*, I point with great pleasure to the fine statistics of Dr. John Homans, of Boston, and of Dr. Robert Battey, of Georgia, whose early initiation of normal ovariotomy was suggestive eventually of the Hegar-Tait operation which included the tubes.

Ovariotomy and its offshoots comprise almost, if not the entire field of abdominal surgery. The establishment of the parent operation brought out the others, if not for the first time, it revived and established them after they had been practically abandoned. "The seed was sown by Bell and Hunter, carried by McDowell, and planted in Kentucky;" its first growth was slow, but gathering strength from the passing years, its top has risen high, and its great branches cover a wide space, where unfortunate men and women of every land and clime gather to find relief from suffering and to acquire new leases of life.

The carbolic spray is still a matter of dispute. In Great Britain, Mr. Thornton adheres to it as of old, Drs. Keith and Bantock, and Mr. Tait will have none of it. The latter said to me, "I sold out all my right, title, and interest in Listerism, with my tea-kettle to Battey."

So far as I know, the best statistics yet obtained in ovariotomy in the United States belong to Dr. Battey, of Georgia, and Dr. John Homans, of Boston, Mass., both of whom operate under the carbolic spray, and in apartments kept especially for abdominal operations. I make special mention of the fact that these gentlemen use the carbolic spray, for the reason that Dr. Emmet says in his last edition, p. 715, "I do not know of any prominent operator in this country who now uses the spray," evidently an oversight.

I do not use the spray myself, but look upon the entire Lister system, less the spray, as firmly grounded in the surgical mind. Cleanliness and Listerism can never be separated, for "Listerism is the gospel of cleanliness;" without the latter you cannot have the former.

The year has wrapped up in its eternal folds one whose name is synonymous with the surgery of women; one whose reputation is immortal, who in America at least, stood next to McDowell; beloved by his own countrymen honored by the entire surgical world. No eulogy of mine can increase his fame. I speak of *the great, the good, the pure, the noble, the generous* Marion-Sims. Like McDowell, he possessed a genius for origination, and will share with him the admiration and plaudits of future generations.

MEDICAL PROGRESS.

POSTERIOR TARSOTOMY IN CLUBFOOT OF LONG DURATION.—At the meeting of the French Surgical Congress, held at Paris, April 6, 1885, M. GROSS, of Nancy, read a paper on posterior tarsotomy in clubfoot of long duration. Various operations are preferred by different surgeons to remedy this deformity. Poinsot and Beauregard prefer cuneiform incision. Lucas-Championnière practises ablation of the astragalus. Ollier advises a mixed operation—excision of the cuboid, of the astragalus, and of the anterior part of the calcaneus. In order to make intelligent choice between the methods proposed, the pathological anatomy of the parts affected must be considered, and a study of the osseous lesions in varus demonstrates that ablation of the astragalus may be an efficient means of correcting the deformity. Sometimes ablation must be supplemented by incision of the plantar ligament. M. Gross exhibited plaster moulds showing the condition of the foot after the operation, and demonstrated that although some internal curvature still existed, the equinism was corrected, and while

the axis of the foot was inclined toward the inner border, the firmness of the tibio-tarsal articulation is perfect and still retained a certain degree of mobility. Nevertheless, ablation of the astragalus does not suffice in every case, and in varus equinus, after such operation, there always remains a deformity which can only be remedied by excision of a portion of the calcaneus and cuboid. In other cases, excision of the external malleolus will serve to correct the adduction; also section of the tendo Achillis. Excision of the astragalus is, however, the preferable operation.

M. Gross held, in conclusion:

1. That posterior tarsotomy is to be preferred as an operation for varus.

2. That with antiseptic precautions the operation is not dangerous.

3. That the solidity of the foot is assured.

4. That the tibio-tarsal articulation remains mobile, and that the movements of the foot depend chiefly on the condition of the muscles.

5. That return of the deformity is not to be feared.—*Gazette Hebdomadaire de Medecine et de Chirurgie*, April 10, 1885.

INDICATIONS FOR OPERATIVE INTERFERENCE IN DEEP WOUNDS OF THE ABDOMEN, PARTICULARLY IN TRAUMATISM OF THE INTESTINE WITHOUT LESION OF THE ABDOMINAL WALLS.—DR. CHARASSE, at the meeting of the French Surgical Congress, held April 6, 1885, concludes a paper on the surgery of deep abdominal wounds by an enumeration of the following principles:

1. Laparotomy should be practised in every case of rupture of the intestine without lesion of the abdominal walls.

2. The operation should be performed as early as possible, and before peritonitis has become severe and alarming.

3. If the rupture is small, one suture should be made, and a drainage-tube introduced; if it involves the whole intestine, or half of its circumference, an artificial anus should be established.

4. The operation is one of incontestable utility, the death-rate in such accidents having been exceedingly high. It is not and cannot be harmful, even when confined to a simple exploratory incision.

5. Contraindications are a pronounced state of collapse, as indicated by a temperature of 95° to 96⅘° F.; concomitant lesions of the spleen, pancreas, kidneys, and liver (the bladder excepted).

CANCER A GERM AFFECTION.—A. LEDOUX-LEBARD, in a paper recently published, advances the theory that cancer is a parasitic disease. In proof of the position assumed he cites the experiments of Langenbeck, Fallin, Lebert, Cohn, and others, in which inoculation with cancerous tissue was practised, some giving positive and others negative results. Ledoux-Lebard considers actinomycosis a variety of cancer, and arrives at the following conclusions:

1. By its clinical, etiological, and, especially, its anatomo-pathological characteristics, cancer presents marked affinity with tuberculosis, a parasitic disease. And hence, there is reason to suspect its parasitic nature.

2. Certain forms of cancer (actinomycoses), belonging to the sarcomatous variety of tumors, are of a parasitic origin. It is, therefore, reasonable to suppose that other varieties are also of parasitic origin.

The paper is followed by an extensive bibliography.—*Archives Générales de Médecine*, April, 1885.

OSTEO-SARCOMA OF THE CLAVICLE; RESECTION OF THE EXTERNAL THREE-FOURTHS OF THE BONE, FOLLOWED BY CURE, WITH CONSERVATION OF ALL THE MOVEMENTS OF THE ARM.—DR. POLAILLON reports a case of osteo-sarcoma of the clavicle, in which the distal three-fourths of the bone were removed with resulting cure and conservation of all the motions of the arm. The patient was a girl 16 years of age. Six months previous to the operation the tumor first made its appearance, and, yielding to no treatment, gradually increased in size. The skin was entirely normal; there was but little pain on pressure. No pain was experienced either day or night. Effort made to write for a long time caused some pain. Quick movement of the arms also caused pain. Elevation of the arms was very painful, and almost impossible. The cervical and axillary glands were not enlarged. Examination showed that the tumor was movable with the clavicle, and that it probably had no relation with the deeper structures. Operation was performed under the carbolic spray. To isolate the tumor the fibres of the deltoid and trapezius, inserted in the clavicle, were cut. The clavicle was cut through immediately external to the insertion of the sterno-cleido-mastoid muscles, and disarticulated from the scapula. Antiseptic dressing, under a compress of wadding, was applied. In two days the dressing was renewed. In two weeks all the sutures and drainage-tube were removed. The health of the patient was excellent.

The 25th of March, 1885, less than two months after the operation, the absence of the clavicle was scarcely noticeable. The contour of the shoulder was preserved, and careful observation necessary to detect any difference between the two sides of the body. The arm was easily put and held in a horizontal position and the hand placed, without difficulty, on the back or top of the head.—*Gazette Médical de Paris*, April 4, 1885.

DEADLY PISTOL WOUND, AND EMBOLUS BY THE BALL.—DR. SCHMIDT, in the *Centralbl. für Chirurgie*, 1885, No. 8, p. 131, reports a case of suicide by pistol, in which post-mortem examination revealed the following: The ball traversed the sixth intercostal space in a course from below upward and from before backwards, and penetrated the left lung at a point corresponding to the fifth rib on the left side. After traversing the lung a distance of nearly three inches, the ball perforated the anterior wall of the left pulmonary vein, without, however, passing through it; the posterior wall being simply eroded. Search for the ball resulted in its discovery in the femoral artery. Its presence here Dr. Schmidt explains by supposing that, having entered the pulmonary vein, it was carried by the current of blood into the left auricle, thence into the ventricle, and from the ventricle as an embolus into the femoral artery. The valves of the heart were found in a normal condition.

No similar case seems to have been reported in medical literature.—*Gaz. Méd. de Paris*, March 14, 1885.

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SATURDAY, MAY 9, 1885.

THE TREATMENT OF CROUP.

THE terms croup and diphtheria have a never-failing interest to the practising physician, and there are probably no diseases concerning which he is more eager for information than these. It cannot be said that the ideas entertained with regard to these conditions, either as to their clinical history or morbid anatomy, are altogether unconfused, and contributions which promise greater definiteness from either aspect are always welcome. We have endeavored to keep our readers informed by noticing from time to time the most important facts, new or old, bearing upon the subject, as adduced in papers and in discussions before societies in this country and abroad, and have now to call attention to a recent valuable paper by DR. J. LEWIS SMITH in the *American Journal of the Medical Sciences* for April, 1885, and entitled "Membranous Croup; Diphtheritic Croup; True Croup."

Dr. Smith applies these terms to any pseudo-membranous laryngitis or laryngotracheitis, from whatever cause. The majority of cases are caused by diphtheria, but others are the result of cold, measles, pertussis, scarlatina, typhoid fever, and irritating inhalations; the rate of frequency being in the order named, and in all instances the morbid anatomy, clinical history, and required treatment are, according to Dr. Smith, so nearly identical that attempts to differentiate the disease as due to diphtheria or other cause, have been futile and unsatisfactory in districts where diphtheria occurs.

It will be seen that Dr. Smith does not ignore a croup due to cold, but says that the anatomical characters, clinical history, and required treatment are the same, and that in New York physicians scarcely recognize any other form of membranous croup than that caused by diphtheria. We do not think that this is exactly true of Philadelphia, for although it is a fact that the morbid anatomy is identical, and, it may be, the treatment demanded, it is generally recognized in Philadelphia that the adynamia in diphtheritic croup is much greater than in croup due to cold, and that the results of treatment, and especially of operative treatment, are correspondingly less favorable. At the same time we think Dr. Smith's classification a good one, and hope it may be generally adopted.

The differences in the false membrane in croup from cold and in diphtheria, are differences solely due to peculiarities in the mucous membrane on which it happens to be deposited. Thus there are no differences in that of the tracheal membrane from either cause, but the membrane formed in the fauces in diphtheria differs from that of croup from the same cause, as well as from that in croup from cold, in being more of the nature of a coagulation-necrosis, the coagulable material infiltrating the squamous cells, which die simultaneously with the infiltration, while in the larynx the membrane lies more upon the surface of the columnar cells.

With regard to treatment, which, for the reason given, he makes the same for all forms of croup, Dr. Smith evidently favors early tracheotomy,—that is, early after membranous laryngeal stenosis is established. He admits, however, that prompt measures, which, if deferred to a time in which such stenosis is established, are useless, may be of service in averting a degree of laryngitis indicated by simple hoarseness, which, if continued, might eventuate in irremediable obstruction. Such are keeping the air of the apartment moist by the croup kettle or by pans, over the fire, of hot water, to each of which is added a lump of lime, or better by steam atomizers. As an inhalation, he deems lime water, slightly turbid and containing about one and a half per cent. of liquor potassæ, as efficient and unirritating a solvent for false membrane as any of the alkaline mixtures. It also renders thinner and more easily expelled the mucopus, which collects in large quantities in the bronchial tubes, and is expectorated with difficulty on account of its viscidity.

Since its first introduction, Dr. Smith has also used with most satisfactory results, for dissolving pseudo-membranes, trypsin, and especially pencilling the fauces every half hour with a solution made by adding to six teaspoonfuls of water a teaspoonful of a mixture of one drachm of Fairchild's extract of pancreas and three drachms of sodium bicarbonate. A solution of trypsin prepared by Fairchild, and used with the atomizer, promises good results.

With regard to the calomel treatment, Dr. Smith admits that it probably exerts a salutary action

either on the exudative process or the pseudo-membrane, without being able to state precisely how it acts. In the ordinary form of diphtheria he would not advise the use of calomel, or would limit its employment to one or two doses of six to ten grains in the commencement of the disease, and in robust cases, but in the treatment of croup he would prescribe it in larger doses and for a longer time; but he does not order it after the first or second day, preferring other remedial measures which are efficient and less likely to produce injurious results. Our readers will be interested to know that a case of recovery is reported in which a child 28 months old took 20 grains of calomel dry on the tongue every two hours until the third day, when 720 grains had been taken, another of 3½ years in which 170 were administered, and a third, 130 grains in ten grain doses after a first dose of twenty grains.

Of the emetics, Dr. Smith considers sulphate of copper one of the best, in doses of two grains repeated, but that in ordinary cases probably the best is turpeth mineral—the yellow sulphate of mercury—in doses of two or three grains of the powder.

The value of the germicides Dr. Smith believes to be still *sub judice*, but gives their use, more particularly corrosive sublimate, due consideration, and refers to several cases in which the latter agent seemed to be followed by happy results. The well-known tolerance of children for the drug explains why it is that a child aged 9 years took $\frac{1}{40}$ of a grain every one and a half hours, and in one day nearly half a grain till the fifth day, when a little more than two grains had been taken. Similar cases are narrated, in one of which a child 2 years and 5 months old took $\frac{1}{48}$ of a grain every second hour for three days. Dr. Smith reccommends from the $\frac{1}{60}$ gr. to $\frac{1}{48}$ gr. every hour or two, but says, also, that it does not seem necessary or prudent, in ordinary cases, to continue the use of the bichloride more than three or four days, in large and frequent doses.

Supporting measures are also required, particularly when the croup is diphtheritic in origin, and among these the tinctures of the chloride of iron, potassium chlorate, quinine, brandy or other forms of alcohol, have their place. All these measures, however, especially if not promptly adopted, are inadequate in a large majority of cases, and surgical interference must be had The indications for it are, according to Dr. Smith, a gradual increase of the stenosis and consequent dyspnœa, notwithstanding constant and judicious use of remedial agents, and a manifest suffering from want of air, as shown by restlessness and the expression of suffering in the patient's features, with or without lividity of the surface. When these symptoms appear the duty of the physician to relieve suffering should prompt to operative treatment, even if the important object of saving life be disregarded.

The two operative measures employed are tubage and tracheotomy, with regard to which we may have something to say in a future issue.

If, now, we compare Dr. Smith's treatment with that of Jacobi, as published in his article on diphtheria in the volume of the *American System of Medicine* just issued, we find first with regard to steam, which Dr. Smith would appear to recommend for all cases of croup, that Jacobi says it can only be expected to increase the secretion from the mucous membrane, and thereby throw off the subjacent membrane, when there is a natural tendency to it—that is, where there are a great many muciparous follicles under a columnar or ciliated epithelium. This is the condition in the pharynx, but in only a small portion of the larynx, in the trac l a and bronchi, but not on the vocal cords. Again steam in an overheated room, and without pure air, is liable to be as injurious as steam in pure air is beneficial to many. Jacobi has repeatedly seen children with croup become less cyanotic after their removal from an atmosphere of vapor, and he can readily see that pure atmospheric air would be more agreeable and wholesome to a child with stenosis of the larynx than an atmosphere laden with steam.

Water, according to Jacobi, is serviceable in various ways. Taken in large quantities, it not only causes copious perspiration, but the same effect is produced on the mucous membrane. Cold and ice applications are not mentioned by Smith, and there is no single measure which we regard so useful. But, according to Jacobi, these, too, have their limit. They are not well borne by very young infants, and the beginning of recovery contraindicates their use, as does also the absence of fever. In such cases, while unlimited internal stimulation is required, the hot bath or hot pack, and hot injections into the bowel will be found beneficial.

Jacobi is not enthusiastic over the solvents for membrane, including lime water, glycerine, lactic acid, pepsin, papayotin, chinolin, and pilocarpine, doubting whether there are sufficient time and opportunity to produce a curative effect. Trypsin had not been introduced when he wrote his article.

Turpentine inhalations, recommended by Edel, are not referred to by Dr. Smith. Jacobi favors their use, floating a tablespoonful of the oil on water, which is kept boiling on a stove or over an alcohol lamp, care being taken that none is spilled on the flame. Ammonium chloride, for its softening and liquefying effect, may be used internally or burned over alcohol or gas. Calomel, for its constitutional rather than its abortive effects, is recommended by Jacobi, 8 to 12 grains in divided doses, and for the same purpose the oleate of mercury rather than the blue ointment, by inunction.

Jacobi's views as to the mode of administration of

the chloride of iron are such that, if they are correct, an important modification of the more usual plan will be necessary. He has not the least doubt that the failure of the remedy may be attributed, in most cases, to the fact that the doses are too small and too seldom administered. Accordingly, he would give 5 to 15 drops, properly diluted, every fifteen minutes or half an hour. Gargles containing this substance are of no service, because they do not remain sufficiently long in contact with the parts. Its direct application is needlessly irritating, while its frequent administration, in the manner described, secures sufficient local action, for which, as well as for its general effect, it is administered.

THE RADICAL CURE OF HYDROCELE.

AFTER Volkmann's operation for hydrocele, which consists in freely opening the sac, and stitching its edges to the scrotal tissues, the fluid reaccumulates in about 1.54 per cent. of all cases, from the failure of the apposed surfaces of the vaginal tunic to unite. With a view to obviate this untoward result, Julliard resects the vaginal tunic, saving, however, enough to cover the testicle and cord, and sews the edges together with catgut sutures. Of his 54 cases, there was recurrence in 1, or 1.85 per cent., so that his operation has not proved to be an improvement upon that of Volkmann on the score of infrequency of the failure of the procedure.

The latest operation that has been recorded is that of Von Bergmann, an account of which is published by his assistant, DR. BRAMANN, in the *Berliner klinische Wochenschrift*, No. 14, 1885. The hydrocele having been freely laid open, the parietal layer of the vaginal tunic is excised, the epididymis and testicle remaining covered by that membrane. The bleeding having been arrested, and the cavity irrigated with a three per cent. carbolic solution, the edges of the wound are approximated except at the most dependent part, at which point a drainage tube is inserted. The parts are then covered with sublimate gauze and cotton, and gentle compression exerted upon them by means of a carbolic bandage.

In the twenty cases in which the operation was practised, all pursued an aseptic and an almost afebrile course. In none was there suppuration or phlegmon of the scrotum, nor was epididymitis or orchitis met with, accidents which have not infrequently been observed after Volkmann's procedure. In from ten to twelve days the healing process had sufficiently progressed to enable the patients to resume their occupations, but in the majority of the cases there was a slight painless thickening in the region of the testicle, which disappeared in a short time.

So far as a conclusion may be drawn from the very limited test to which the operation of Von Bergmann has been subjected, it may be pronounced to be free from danger to life and the inconvenience of relapse; but whether this conclusion will be borne out by a more extended experience is very questionable. Thus, of 305 cases of Volkmann's operation which we have collated—and it is a simpler one than Von Bergmann's—4 died, and there was recurrence in 4, while, as we have seen, there was 1 recurrence out of 54 cases of partial excision of the vaginal tunic in the practice of Julliard. Our own opinion is that not a single one of these procedures should be resorted to in ordinary cases, but that they should be reserved for those cases in which the sac is much thickened, and for examples of recurrence after the injection of carbolic acid, which we regard as being the most promising, safest, and simplest of all the modern measures that have been suggested for the radical cure of hydrocele.

THE INTERNATIONAL MEDICAL CONGRESS AND THE AMERICAN MEDICAL ASSOCIATION.

THE action of the American Medical Association at its recent meeting, expressing dissatisfaction with the work of the Committee of Organization of the Ninth Session of the International Medical Congress, was unexpected, but it is now easy to see how it was brought about.

The Committee in undertaking its task, of course believed that it had been clothed with full powers, and, as far as authority from the American Medical Association is concerned, this belief appears to be justified by the resolutions under which the invitation was extended, and which were as follows:

"*Resolved*, That a committee of seven, of which Dr. Austin Flint, the President of this Association, shall be a member, shall be appointed by the President.

"*Resolved*, It shall be the duty of this Committee to extend, in behalf of the medical profession of the United States to the International Medical Congress about to meet at Copenhagen, a cordial invitation to have the next International Medical Congress meet at Washington, D. C., in 1887.

"*Resolved*, That the Committee shall elect its own officers, and that, in case the invitation is accepted, it shall proceed to act as an Executive Committee, with full power to fix the time and to make all necessary and suitable arrangements for the meeting of such Congress, and to solicit funds for this purpose.

"*Resolved*, That the Committee shall have power to add to its membership, to perfect its organization, and that, to meet the preliminary expenses of printing, postage, etc., the Chairman of this Committee is authorized to draw upon the Treasurer of this Association for an amount not exceeding four hundred dollars."

The Association acted on the hypothesis that, inasmuch as it had voted that an invitation be extended "in behalf of the medical profession of the United States," to the Congress to hold its Ninth Session in Washington, which had been accepted, therefore, the authority vested in it to organize the Washington Congress. The action of the Association in formally disowning the subsequent

work of the Committee of Organization must, of course, cause embarrassment, and great care is necessary to prevent unpleasant results, especially since the important appointments made in the course of preliminary organization have been widely published, both in this country and in Europe.

The Committee has acted on the theory that the International Medical Congress is a permanently organized scientific body, in which the medical profession of the United States has a right to be represented as a whole, that the men to be selected to organize the Sections should be men of scientific reputation both at home and abroad, and that if a man is thus well known, his place of residence is a secondary matter. The Association, on the contrary, prefers the State as a unit of organization to the United States, and wishes to have the Congress organized on essentially the same plan as the Association itself. This we believe to be a mistake, due to an erroneous view of the nature and objects of the Congress, but the mistake has been made, and the only thing now is to do the best that can be done under the circumstances, and to this end we are confident that wise and conservative counsels will ultimately prevail.

It is of course impossible to predict the action which the Committee of Organization will take in this matter. It is safe to say, however, that it will do nothing without due consideration, keeping in view its responsibility to the Executive Committee of the Copenhagen International Medical Congress, and its duty to the medical profession of this country as well as to that of Europe, to secure, if possible, harmonious action, and to prevent the country from being disgraced by a failure to meet the obligations incurred by the invitation which has been extended and accepted.

At the best, there must be, now, delay in the work of organization, but there is time enough to permit of this, and we hope that our professional brethren abroad will not jump to a hasty conclusion, and suppose that the dissensions which have been stirred up among us are so great that it will be better to change the place of meeting of the Congress.

LACTIC ACID AS A DESTRUCTIVE OF DISEASED TISSUES.

PROFESSOR VON MOSETIG-MOORHOF, of Vienna, induced by numerous observations upon the destructive action of concentrated lactic acid upon fungous granulations, has most successfully employed that agent in lupus vulgaris, superficial epithelioma, and papillomatous growths. When brought in contact with diseased tissues, the latter, in the course of a few hours, are converted into a loose, black pultaceous mass, the cells, stroma, and vessels being completely destroyed, without the slightest effect having been exerted upon the adjacent healthy parts, through which the agent possesses manifest advantages over ordinary escharotics.

The mode of applying the remedy is as follows: The parts, having previously been carefully cleaned, are covered with absorbent cotton wet with the fluid, over which a piece of impermeable material, as rubber cloth, is placed, and the whole confined with a roller; or a soft paste, made by the addition of pure silicic acid, is spread upon gum tissue, and secured in place. At the expiration of about twelve hours, the dressings are removed, and water applied for one or two days, when the application is renewed. The treatment is continued in this way until all the morbid tissue has disappeared, as is shown by commencing cicatrization. The application is by no means painless, but it is readily borne.

The resulting scar is soft and smooth, but as yet Mosetig is unable to speak as to the final result with regard to recurrence. He, however, thinks that lactic acid is indicated more especially in those cases of lupus and rodent ulcer in which the patient objects to the use of the spoon, and in cases of epithelioma which are beyond the reach of the knife. The remedy certainly deserves a fair trial, as it is the only one of which we have any knowledge that acts solely upon the diseased tissues. Mosetig's paper may be found in the *Centralblatt für Chirurgie*, No. 12, 1885.

ABDOMINAL SECTION IN RUPTURE OF THE CYST IN EXTRAUTERINE PREGNANCY.

AUTHORITIES differ as to the proper treatment in case of rupture of the cyst in extrauterine pregnancy. Lawson Tait, whose views upon this subject were presented to our readers a few months since, strongly advocates immediate abdominal section with removal of fœtus and of the fluids that have been poured out in the abdominal cavity, and arrest of hemorrhage by ligation of bleeding parts. On the other hand, Dr. W. W. Jaggard, in a paper recently read before the Chicago Medical Society, strongly advocated palliative measures in such condition. Dr. Jaggard, in the course of his argument, suggests it as possible that recovery after ectopic gestation is not an uncommon event, quoting Schroeder, who states that he so frequently sees cases of tubal pregnancy, in which the diagnosis is positive, pursuing a favorable course, that he considers recovery as the regular termination. He further regards the prognosis of the operation of abdominal section as very unfavorable, among other reasons, because of the patient being in a condition of more or less profound shock, and because of her acute anæmia, while the anatomical conditions of the parts are not easily made out even in post-mortem examinations of those who have died from ruptured gestation cyst.

The palliative treatment is also advocated by Karl Braun, Schroeder, Martin, Wells, Thomas, and Emmet.

SOCIETY PROCEEDINGS.

THE AMERICAN MEDICAL ASSOCIATION.

Thirty-sixth Annual Meeting, held at New Orleans, April 28, 29, 30, and May 1, 1885.

(Specially reported for THE MEDICAL NEWS.)

FRIDAY, MAY 1ST.—FOURTH DAY.

THE Association was called to order at 10.30 A. M. by VICE-PRESIDENT DR. J. S. LYNCH, of Maryland.

The Committee of Arrangements reported a few additional entertainments.

The following were announced to have been appointed, under the resolutions adopted on Wednesday, as the additional members of the Committee of Arrangements for

THE INTERNATIONAL MEDICAL CONGRESS:

Dr. G. A. Ketchum, of Mobile, Ala.
Dr. D. A. Linchicum, of ——, Ark.
Dr. R. Beverly Cole, of San Francisco, Cal.
Dr. Chas. Denison, of Denver, Col.
Dr. ——, of ——, Conn.
Dr. L. P. Bush, of Wilmington, Del.
Dr. A. Y. P. Garnett, of Washington, D. C.
Dr. R. D. Murray, of ——, Fla.
Dr. R. Battey, of Rome, Ga.
Dr. E. P. Cook, of Mendota, Illinois.
Dr. F. M. Beard, of Vincennes, Ind.
Dr. ——, of ——, Iowa.
Dr. D. W. Stormont, of Topeka, Kan.
Dr. W. H. Wathen, of Louisville, Ky.
Dr. J. W. Dupree, of Baton Rouge, La.
Dr. S. C. Gordon, of Portland, Me.
Dr. J. S. Lynch, of Baltimore, Md.
Dr. A. H. Wilson, of South Boston, Mass.
Dr. A. R. Smart, of Hudson, Mich.
Dr. George F. French, of Minneapolis, Minn.
Dr. J. M. Taylor, of Corinth, Miss.
Dr. N. F. Essig, of Plattsburg, Mo.
Dr. R. C. Moore, of Omaha, Neb.
Dr. J. W. Parsons, of Portsmouth, N. H.
Dr. William Pierson, of Orange, N. J.
Dr. Ellsworth Eliot, of New York.
Dr. ——, of ——, N. C.
Dr. X. C. Scott, of Cleveland, Ohio.
Dr. J. V. Shoemaker, of Philadelphia, Pa.
Dr. W. E. Anthony, of Providence, R. I.
Dr. R. A. Kinloch, of Charleston, S. C.
Dr. F. L. Sim, of Memphis, Tenn.
Dr. William McLaughlin, of Austin, Texas.
Dr. W. C. Dabney, of Charlottesville, Va.
Dr. ——, of ——, Vt.
Dr. G. Baird, of Wheeling, W. Va.
Dr. N. Senn, of Milwaukee, Wis.
Dr. Robert Murray, U. S. A.
Dr. J. B. Hamilton, U. S. Marine Hospital Service.
Dr. F. M. Gunnell, U. S. N.

The Committee was called to meet at once.

DR. QUIMBY, of New Jersey, offered the following:

Resolved, That the Committee appointed in pursuance of a resolution adopted by this Association, April 30, 1885, to constitute an addition to the original Committee of seven previously appointed to invite and make arrangements for the meeting of the International Medical Congress, to be held in Washington, D. C., in 1887, be, and the said Committee is, hereby authorized and empowered to select a Chairman and a Secretary, and to fill all vacancies that may occur by death or inability to attend in the committees, and to appoint the officers of the Congress. Adopted.

PRIZES.

DR. R. HARVEY REED, of Ohio, offered the following:

Resolved, That a committee of three be appointed by the President, whose duty it shall be to devise a system for the awarding of honors to those who may desire to present original papers at the next meeting, and that the said committee shall report through the *Journal* of the Association. Adopted.

THE RESIGNATION FROM THE JUDICIAL COUNCIL

of Dr. Brodie was read and the resignation accepted.

STATE BOARD OF MEDICAL EXAMINERS.

The Section on State Medicine presented the following:

Resolved, That the Section on State Medicine heartily recommends the appointment in each State of a State Board of Medical Examiners and Licensers.

That the Committee appointed by the Association shall construct and forward to each State Society the form of a bill, the passage of which by the Legislatures these Societies shall be requested to urge strongly.

DR. KELLER, of Arkansas, asked that his resolution in regard to

CREMATION,

offered three years ago, be now taken from the table and considered. On motion, it was referred to a special committee to report next year.

The Nominating Committee reported the following additional

NOMINATIONS:

Trustees of the Journal.—Drs. J. M. Toner, of Washington; J. H. Hollister, of Chicago; E. M. Moore, of Rochester, N. Y.

Committee of Arrangements.—Dr. Legrand Atwood, of St. Louis, Chairman.

Judicial Council (to fill vacancy occasioned by resignation of Dr. Brodie).—J. K. Bartlett, of Wisconsin. Adopted.

THE ADDRESS IN OPHTHALMOLOGY, OTOLOGY, AND LARYNGOLOGY,

was read by DR. J. A. WHITE, of Virginia. After referring to the difficulties of reviewing, in a proper manner, the advancements that have been made in any single branch of the medical sciences, he gave a critical review of the ophthalmological work of the past year; notably, the efforts made for the improvement in the treatment of detached retina. He also recommended the substitution of enucleation by evisceratio bulbi, which was originated by Dr. Henry D. Noyes, of New York, but was comparatively unknown until Alfred von Graefe brought it prominently forward. The important work of Landolt in determining the converging power; the improved indications for the use of jequirity; and the value and application of cocaine,

with an explanation of its physiological action, all received due attention.

The main consideration of the paper was the reflex neuroses of the nose, such as reflex cough, sick headache, hay asthma, etc., in which, with a full review of the present aspect of that question, the author produced facts, in many instances somewhat at variance with the idea that engorgement of the nasal mucosa is essential to the production of the reflex phenomena.

DR. J. H. POPE, of Texas, then delivered

THE ADDRESS IN DISEASES OF CHILDREN.

He said that there have been no special advances in the department which he represented, unless it be in the improvements in certain methods of treatment, and in remedies. A good many so-called specific remedies have been introduced, and their value cannot be determined at so recent a date. Among other advances has been the use of disinfectants. Notably among these is the bichloride of mercury. Dr. J. Lewis Smith, of New York, has called especial attention to his results from its use in diphtheria. Some of the cases which he has reported are remarkable. In some of them tracheotomy appeared almost unavoidable, but by the persistent use of bichloride of mercury the dangerous symptoms were averted.

As regards the pathology and etiology of children's diseases, there cannot be said to have been any advance. He, however, stated that in his experience a new view of the causation of rickets could be advanced. He had observed that it occurred more frequently in children who were nourished at the breast until long after the proper time for weaning than in any other class. Too long nursing then was one of the most frequent causes of the affection. He expressed, in conclusion, strong regret that the Section on Disease of Children is not better attended at all the meetings. This fault was not perhaps so patent at this meeting as at a number of previous ones, when compared with the attendance, but there was still not the number present that should have been.

DR. QUIMBY, of New Jersey, reported that the committee appointed to consider the suggestion of the President that a section on forensic medicine be added to the present list of sections, had considered the matter and now recommended that such a section be formed, to be styled, a

SECTION ON MEDICAL JURISPRUDENCE,

and that the constitution be so amended as to admit of this addition to the sections already in existence.

The Address on Oral and Dental Surgery was read by title, the author, DR. W. W. ALLPORT, of Illinois, being absent.

THE REPORT OF THE COMMITTEE ON NECROLOGY

being called, DR. J. M. TONER, the Chairman, stated that since the establishment of the *Journal* he had reported promptly through it all the deaths of members. He asked further that the members of the Committee on Necrology, in each of the States, should report promptly either to him or to the editor of the *Journal* all deaths of members as they occur.

DR. EUGENE SMITH, of Michigan, stated that at the last meeting of the Association a resolution was offered by Dr. Seiler, of Philadelphia, providing for the

DIVISION OF THE SECTION ON OPHTHALMOLOGY, OTOLOGY, LARYNGOLOGY, AND RHINOSCOPY,

into two separate bodies, one to be known as the Section on Ophthalmology, the other as the Section on Otology, Laryngology, etc., and moved that it be now taken up for action.

The motion being carried, Dr. Smith moved that it be permanently tabled, such a division being clearly inexpedient and unnecessary. The motion was unanimously carried.

A motion was then made to take up the remaining resolutions laid on the table at the last meeting.

Dr. Von Klein's (Ohio) resolution providing for the requirement of a

HIGHER EDUCATION

in order to become members of the American Medical Association, and other requirements intended to elevate the standing of the profession, was then called up.

THE SECRETARY stated that a letter had been received from Dr. Von Klein, requesting that his resolutions be laid on the table for another year. It was the opinion of the Association that they could be acted upon at once, and they were tabled indefinitely.

The resolution of Dr. Cochran, of Alabama, that it is the sense of the Association that it is not expedient for the members of

THE NOMINATING COMMITTEE

to nominate any of its own members to offices of the Association, was taken up and discussed at length, and finally laid on the table.

A VOTE OF THANKS

was tendered by the Association to the entire profession of New Orleans, and particularly to the Committee of Arrangements, who have by their attentions and kindness enabled the members to enjoy thoroughly this meeting of the Association. Also to Dr. and Mrs. T. G. Richardson, Mr. and Mrs. Cartwright Eustis, and the New Louisiana Jockey Club, all of whom have added greatly, by their hospitality, to the enjoyment of the Association.

Dr. M. H. Henry was announced as a

DELEGATE TO THE BRITISH MEDICAL ASSOCIATION,

and it was further resolved that other members desiring to become delegates could be elected by the vote of the President and Permanent Secretary.

THE PRESIDENT-ELECT,

Dr. Brodie, was then introduced, and accepted the trust in a few words of appreciation of the favor.

The retiring President, Dr. Campbell, thanked the Association for their consideration and assistance during the session just ended.

Adjourned.

SECTION ON THE PRACTICE OF MEDICINE, MATERIA MEDICA, AND THERAPEUTICS.

TUESDAY, APRIL 28TH.—FIRST DAY.

The Section was called to order at 3.40 P. M., DR. H. D. DIDAMA, of New York, Chairman, presiding.

DR. W. A. LOVE, of South Carolina, stated that if he

was in order, he would move that the resolution from the South Carolina Medical Society on the

DISCOVERY OF THE ANÆSTHETIC PROPERTIES OF ETHER,

which was referred to this Section by the Association, be entrusted to a special committee, with instructions to report at this meeting, if possible; if not, at the next.

Adopted.

The Chairman appointed Dr. W. A. Love, of South Carolina; Dr. H. J. Bigelow, of Massachusetts; and Dr. R. J. Dunglison, of Pennsylvania.

DR. L. DUNCAN BULKLEY, of New York, read a paper on

THE TREATMENT OF CARBUNCLE WITHOUT INCISION.

He related the case of a gentleman, aged 56, large and florid, who suffered for several years with eczema of the left foot. He was also diabetic. Following upon this eruption was a large carbuncle. He applied to this tumor, thickly spread on the woollen side of lint, the following ointment:

℞.—Ergot. fl. ext. . . . . ʒij.
Zinci oxidi . . . . . ʒss.
Unguent. aq. rosæ . . . . . ʒij.—M.

Covering this was cotton-batting, to prevent blows or injury. He was given sulphite of calcium ¼ gr. every two hours, and occasionally the following:

℞.—Magnesiæ sulphat. . . . . ʒiv.
Ferri sulphat. . . . . ʒj.
Acid. sulphurici dil. . . . ʒiij.
Syr. zingiber. . . . . ʒj.
Aquæ . . . . . ad. ʒiij.—M.

S.—Teaspoonful in water through a tube three times daily.

At bedtime, Dover's powder was administered to give rest when required. The result of the treatment was cessation of pain, rapid resolution, and a cure, except some induration, in eighteen days. The man continued at his work.

He summed up his paper as follows:

1st. Avoid any irritation, as pressure, blows, etc.

2d. Avoid warmth and moisture, as in poultices.

3d. Avoid incision.

4th. Do not use stimulants.

5th. Protect the inflamed parts with the ointment given above. The solid extract of ergot may be used if desired. Spread the ointment at least one-third inch thick.

6th. Use sulphite of calcium every two hours for its effect upon suppuration.

7th. Employ good, nutritious food, and fresh air.

8th. A sedative, if desired, and occasionally the laxative and refrigerant tonic as above.

The advantages are:

1st. Short time required for recovery. 2d. Cessation of pain. 3d. No scar. 4th. No operation. 5th. No detention from business.

DR. HIBBERD, of Indiana, said that up to a year ago he had tortured his cases with poultices, incisions, and the orthodox measures generally. Since then he had used in every case oleate of morphia. He had this rubbed gently into the base of the tumor, and gradually encroaching upon the tumor itself, every three hours. The pain always ceased within twenty-four hours, and in ten to fifteen days the patients were well, except a little induration.

DR. SAVAGE, of Tennessee, three years ago began the use of cantharidal collodion applied in a ring one-half to one inch broad around the base. This forms a blister and eases the pain at once. He makes a small incision, also, if pus has formed. In one case he applied a cantharidal plaster over the whole tumor and extending beyond it, with excellent results; the patient a farmer, was following the plow in a week. He gives internally calcium sulphite, one-fourth of a grain, four times daily.

Dr. BULKLEY said that he uses this form of treatment in large and small tumors. He lets them run their course, protecting them as much as possible and allows nature to do the opening. In using calcium sulphite, it is important to be sure that it is fresh; the gelatine-coated preparation is preferable. Exposed to the air, it becomes gypsum. He had not used oleate of cocaine.

DR. A. F. PATTEE, of Boston, read an article on

THE PERCUTEUR: ITS USE IN DISEASES OF THE NERVOUS SYSTEM.

This instrument had been introduced by Dr. Granville, of England, to carry out his theory of nerve vibration and excitation in the cure of disease. In the instrument exhibited electricity was used to give motion to the hammer. By this hammer percussion was practised along the course of diseased nerves or the spinal cord. Several cases were detailed in which improvement followed.

DR. R. HARVEY REED, of Ohio, read a paper on

HYDATID TUMOR OF THE BRAIN.

He stated that hydatid cysts are caused by either the echinococcus or the cysticercus cellulosa; that the former are the embryo of the tænia echinococcus and the latter of the tænia solium. He then followed with a description of a cycle of life of these parasites as he understood them, and closed with a detail of his four cases. The size of the cysts varies according to the locality and the space allowed for expansion. No very great damage results from these cysts if they occur in the cellular tissue. In muscle tissue the danger increases with the depth. Those deposited in the posterior chamber of the eye give serious trouble. In the brain they are rare, are ultimately fatal, and the symptoms are very obscure. He had charge of four cases, in all of which he had held autopsies and in two of which he had diagnosed hydatids before death.

A travelling doctor, age 46, first came to Dr. Reed in 1880, complaining of being easily fatigued both mentally and physically. Later he began to suffer from vertigo, which increased; his head would fall forwards; if he attempted to walk he staggered; very nervous; appetite bad; bowels regular; urine normal; stupor supervened, increased, and death followed. At the autopsy an hydatid tumor was found.

DR. ——, of Iowa, was inclined to doubt the correctness of the diagnosis had not the statements been proved by the microscope. Cases of this nature are rare in this country, and many physicians had never seen a case. It would be difficult for the parasite to

find its way into the brain, and it is strange that in none of the cases were any of the other organs, especially the liver, affected.

DR. WHITTAKER, of Cincinnati, did not think these cases could serve as statistics until Dr. Reed furnished trustworthy and satisfactory evidence that the tumors were hydatid cysts. Certain cysts occurred in the brain, some of an apoplectic nature, which resembled in many particulars hydatid cysts. He would ask who made the microscopical examinations, and what the results were?

DR. REED could not explain how so many cases should occur in Ohio. It is just as easy for the embryo to get into the brain as anywhere else. He had examined many cysts from the rabbit, in which animal they are frequent, and he is familiar with the microscopical appearance of the tumors and the hooklets. He had examined two of the tumors, and demonstrated their hydatid nature. One of the tumors had been sent to Cleveland, where it was lost, the other had been stolen.

Several members, among them Dr. Didama and Dr. Hibberd, objected to Dr. Reed's statements of the natural history of the tæniæ and the stages of development. The Chairman gave the generally accepted views on this point.

DR. WHITTAKER, of Cincinnati, read a paper on

AN ATTEMPT AT A RADICAL TREATMENT OF TUBERCULOSIS.

The attempts were made with subcutaneous or parenchymatous injections of a solution of bichloride of mercury into the lung at the site of the disease. He used a preparation consisting of common salt 10 parts to 1000, and corrosive sublimate 1 to 1000. He administered the injections every day, amounting to about one-eighth of a grain in a syringeful of water. Though he watched the cases carefully the results were negative.

WEDNESDAY, APRIL 29TH.—SECOND DAY.

The Secretary read DR. AUSTIN FLINT'S paper on

A UNIFORM NOMENCLATURE OF PHYSICAL SIGNS WHICH OCCUR IN CONNECTION WITH THE RESPIRATORY SYSTEM.

The Secretary conveyed Dr. Flint's regrets at his enforced absence, and his request that his paper be read.

The paper was a provisional report of the Committee appointed at the meeting of the International Medical Congress, in London in 1881. The Committee had been composed of English, American, French, and German members, and it was decided that work should be assigned to five subdivisions in accordance with the nationalities above mentioned. Five lists were thus drawn up with much care and study, and were exchanged. The result of their work has already appeared in THE MEDICAL NEWS, of Sept. 6, 1884, p. 273.

Heretofore terms were very loosely applied, and carelessly selected—in some cases signs were named after authors or discoverers. They should be chosen by analytical study, by analysis, and comparison of physical signs. The most important elements to be considered in establishing a nomenclature of physical signs are: 1, intensity; 2, pitch; 3, quality; 4, distance; 5, moisture or dryness; 6, succession or continuity. The only solid foundation for such a study are clinical observation and autopsies.

The Secretary read a paper by DR. A. T. KEYT, of Cincinnati, on

CARDIOGRAPHY,

which was defined to be the art and science of graphic representation of the heart's action by means of an instrument based on the same principle as the sphygmograph, and applied to the heart's point of impulse upon the chest. It is less known than its sister instrument, but was applied as early as 1880, by a French observer, and is worthy of attention. The application of the cardiograph was illustrated by diagrams and some cases.

DR. N. S. DAVIS addressed the Section on the

RELATION OF CHEMICAL FACTS TO THE QUESTION OF CONTAGIOUSNESS OF PHTHISIS PULMONALIS.

The determination of such a question as the one before us, he said, should rest on the completeness of clinical history and observation, with a careful study by instruments of precision of all the secretions and fluids of the body. If the bacillus tuberculosis is found in some excreta, we are at once told that the case is phthisis, and the bacillus is the cause. Are these statements necessarily correct? Grant that the bacillus is found in all tubercular matter and not in other matter, and grant that such tubercular matter, if inoculated, is always followed by tuberculosis, is it necessarily the case that the bacillus is the cause of the disease and the disease itself contagious? Is it not just as fair to presume that the bacillus is simply an accompaniment of the diseased process found with it, but not the cause? Is it not just as legitimate to say that it got there after the beginning of the disease, but not as a cause? But some form of bacteria accompanies every form of deterioration. The microscope must be called in to assist in settling this point. It has shown that the bacillus is not present in all cases. But if a microscopist, however expert, finds some tubercular matter without the bacillus, they say his observations are imperfect. According to this, Koch must examine every specimen of such matter, or the result will be questioned.

If tuberculosis follows the inoculation of tuberculous matter, or the bacillus in animals easily made tuberculous, then three probabilities may be asserted: 1. The bacillus may be the cause; 2. The matter may be the cause; or, 3. The excreta may be the cause. Inoculation with the bacillus *alone*, without any other matter, has never been accomplished, and doubts must always accompany the results of the experiments until some one catches one of these little organisms by the tail and inserts it alone in the subject. One great fault of medicine is jumping to conclusions from one, two, or three data. We are told if we fail to find bacilli maybe the spores are there. As to spores, he would say that years of microscopical study have shown him that one can see anything with the instrument he sets out to find. Where do spores come from? If a body of a healthy man be exposed twelve hours in a high temperature an abundance of spores will be found. All organic matter undergoing decay is accompanied by some form of spores. May not the atoms of bioplasm which develop into

high forms, as cells, in the process of deterioration change in germs.

He has gathered up much material reviewing the clinical facts of cases supposed to have resulted from contagion. Of the millions exposed to infection he ventured to say that not one in a thousand manifests any indication of the disease. In the Hospital for Consumptives, in which there has been an average of fifteen Sisters of Charity as nurses since 1850, not one has died of phthisis. Of the internes, of whom there are usually four, not one that had not any indications of the disease prior to his entrance has died of consumption. And the story is the same in all hospitals. When we adduce such facts we are given histories of cases where husbands infect their wives, or vice versa. These are only coincidents. We are further told that bacilli are floating in the air. If so, and the bacillus is the cause of consumption, why has not the human race been annihilated? We are told that it requires a predisposition or starting point of deterioration. If so, then logic would say that the deterioration or predisposition was the disease, and the bacillus was only present as other germs.

DR. LYNCH, of Maryland has been engaged in investigating this question, and had attended the meeting at Washington for this purpose. The conclusion at which he had arrived was that the bacillus is not a factor in the cause of phthisis. It is found wherever there is any cellular matter. In every pathological state some bacteria are present, but they do not produce specific disease if carefully separated from the matter in which they exist. Ten young men inoculated themselves with the gonococcus without any result.

DR. WHITTAKER, of Cincinnati, believed that tuberculosis is contagious, and that the bacillus is the cause. He believed that more than half of us have tuberculosis, but only a few develop into consumption and die.

DR. SHOEMAKER read a paper on *The Hypodermatic Injection of Oils in the Treatment of Diseases;* and DR. R. J. NUNN, of Savannah, read one on *The Mineral Foods, and How to Give them.*

THURSDAY, APRIL 30TH.—THIRD DAY.

DR. J. H. HOLLISTER, of Chicago, read a paper on

CHOLERA AND ITS TREATMENT.

1. Its origin; 2. Its pathology; 3. Its manner of propagation; 4. Its means of control; 5. Its treatment. The origin was still more or less in doubt, but most probably on the Ganges. It first appeared in London in 1669, and in Paris in 1793. In Madras it was endemic, and under certain meteorological conditions became epidemic. In America it is not endemic. It is only communicated from foreign countries. It is not spread by air or ocean currents, but is always brought in infected ships from infected ports. It moves inland only along lines of travel. It never appears in localities absolutely isolated. The comma-bacillus is the practical point of discussion. Is it the cause of cholera? The French Commission in Egypt reported adversely to such an opinion, and Dr. T. Lewis, of Calcutta, states that the so-called comma-bacillus, or something similar to it, is found in the saliva of healthy persons. The crucial test, inoculation and production of the disease, has not been performed. The conditions for the life and growth of the poison outside of the system are: 1. Warmth; 2. Moisture; 3. Decaying organic matter.

DR. AUSTIN FLINT, who was to have opened the discussion, sent a short paper, in which he stated his belief in the specific character of cholera and in the comma-bacillus as the cause. Then, without developing them, he raised the points of the importance of quarantine and other means of prevention of cholera and its control when in progress.

It may be disseminated by air and water, but are there not other means? Do choleraic dejections contain the agent, and is it in those of cholerine? He believed that cholera might be stamped out as in New York, in 1867, where house-to-house inspections were so valuable. It was important to treat the premonitory diarrhœa, to remove filth, and afford good hygienic measures. In therapeutics, which are wide, nothing compares with opium up to the stage of collapse.

DR. N. S. DAVIS said that he was a total disbeliever in the idea of importation. He had seen cases develop in the city totally independent of each other, and before any such thing as cholera was thought of. It is one thing to follow the official record and another to be right there yourself. It was in Chicago six weeks before it became known. He had reported a case of cholera nearly two months before the authorities discovered the disease, but his statement had been pigeonholed. In July, 1866, it started in Chicago; a rainy season in August washed the city clean, and the disease died out. In October it became hot and sultry, and it broke out again in the filthiest part of the city. The treatment of cholera is cleanliness.

DR. LYNCH had very little belief in the bacillus as a cause. Dr. Flint deprecates opium in collapse. In cholera nostra, with rice-water discharges, blue, cold surfaces and contracted skin, he uses morphia and atropia with immediate success. He would use it in cholera.

DR. JONES, of New Orleans, believed in the germ theory as applied to cholera, that it is portable, and depended upon bad sanitation. It came down the river in 1832, and driving out yellow fever, caused six thousand deaths in twenty days.

DR. TAYLOR, U. S. Army, thinks the disease contagious, but is doubtful as to the part played by the comma-bacillus. Isolation, in his opinion, is an absolute prevention. Nothing equals opium in the early stages, but it is contraindicated in collapse.

DR. WHITTAKER, of Cincinnati, thought the disease imported and a germ disease. No chemical agent increases in the body as does the poison of cholera. Koch did not claim that the comma-bacillus is the cause of cholera; it is present in all cases.

DR. JEROME COCHRANE, of Alabama, read a short paper on

HEMORRHAGIC MALARIAL FEVER,

and stated some of his conclusions as follows:

1. This form of malarial fever originates only in malarial regions, though it may exhibit itself elsewhere.

2. The poison is the same as that in remittent and intermittent fevers.

3. It may show itself in the following forms: *a*, intermittent; *b*, remittent; *c*, congestive; *d*, quasi-continued.

4. The congestive form is almost necessarily fatal, the prognosis in the remittent and the quasi-continued forms is bad, the intermittent form is less fatal.

5. The negro is comparatively exempt.

6. Only those persons suffering under malarial cachexia are attacked.

7. One attack is not protective.

8. It begins usually in the afternoon or at night with a chill, followed by fever, bilious vomiting, discolored urine, jaundice.

9. The fever, except in the remittent and quasi-continued form, is not usually high.

10. Skin harsh and dry.

11. Bowels constipated, liver torpid.

12. Vomiting, early nausea, matter yellow, green, black, or even blue.

13. The black vomit is usually changed bile and in the beginning of the case.

14. Icterus begins with chill, and deepens rapidly.

15. Characteristic red urine, profuse at first, begins with chill. In fatal cases there is suppression.

16. This red urine is albuminous with granular casts. Color is due to blood-pigment hæmoglobin, not corpuscles.

17. The post-mortem appearances are similar to those of other malarial affections with enlargement of the kidneys added.

Cases reported	642
Deaths	188
Per cent.	24.60

Blood-corpuscles in the urine are accidental. The serum of blisters is colored the same way.

As to treatment:

1. The superabundance of bile renders the use of mercurials of great service. Some physicians use small, frequently repeated doses. Others like large doses—in one instance, a doctor was in the habit of giving 60 to 70 grains at a time.

2. Warm drinks are of service in promoting emesis, to get rid of the large amount of bile thrown into the stomach.

3. Sweating to reduce the harshness of the skin, and promote its action for this purpose, heat to the surface, hot drinks, and occasionally diaphoretics are used.

4. Management of the kidneys is a disputed point. The majority are in favor of letting them alone. Even in suppression of urine, trust to the compensatory action of the bowels and skin.

5. Quinine was formerly looked upon as the sheet-anchor in this affection. It exerts less control here than in any other form of malaria, and is losing gound.

DR. GHENT, of Texas, had treated forty-seven cases with five deaths. He thinks the red color due to blood-corpuscles. He uses calomel first, last, and always.

DR. TAYLOR, U. S. Army, had an experience similar to Dr. Cochrane's. But he had always found micrococci in the blood of these cases, and always blood-corpuscles and albumen in the urine. It is very fatal. Quinine will control the fever to a certain extent, but nothing more. Calomel and bicarbonate of soda in small doses are of great value.

DR. JOS. JONES, of New Orleans, thinks most cases of so-called hemorrhagic malarial fever, or hæmaturia, are really melanuria. The fibrin is increased as in inflammations. There is red matter in the urine in all fevers. In melanuria, in addition to blood-corpuscles, there is also bile, as proved by testing with nitric acid. Serum of a blister is so colored. The origin of this disease is congestion of the kidneys, and the consequent pouring out of blood in the tubuli, just as in congestion of the brain. The rest of the pathology is due to the want of functioning of the kidneys because of this fact. The prime cause is malaria. He is prepared for good effect from calomel, since the pathology includes an increase of fibrin in the blood, but he would not abandon quinine.

SECTION ON OBSTETRICS AND DISEASES OF WOMEN.

TUESDAY, APRIL 28TH.—FIRST DAY.

DR. R. S. SUTTON, of Pittsburg, Chairman, called the Section to order.

DR. WM. H. WATHEN, of Louisville, read a paper on the

TREATMENT OF THE SECUNDINES IN ABORTION AND LABOR,

of which the following is an abstract:

Three methods have been urged: (1) The expectant method; (2) The immediate removal; (3) A course, intermediate. During the first two months of pregnancy no placenta exists, and the egg, together with the decidua, is usually expelled in abortion *en masse*. Even in case of retention of membranes, during this period, no operative interference, of a radical character, should be instituted, as the fœtal envelopes are comparatively innocuous, and the danger from trauma is relatively great. From the third to the end of the seventh month, it is advisable to remove the secundines immediately, irrespective of the condition of the cervix as regards dilatation.

The retained placenta in premature labor, or labor at full term, should always be removed at an early period. If the os is dilated, the fingers or curette suffices; if the os is not dilated, he employs a modification of the steel dilator of Scanzoni. The cervix can be dilated by this means to a width of two and one-half inches, and the secundines can be removed by the finger, curette, or forceps. Instead of the curette, a piece of copper or iron wire properly curved may be used. The separation of amnion from chorion, without rupture of bag of waters, as recently pointed out by Dr. Sawyer, may occur. This is a subject to which text-books do not allude. In the third stage of labor, if the placenta was not spontaneously expelled within thirty minutes, it should be removed. He had no confidence in the Strasburg method of treatment of the third stage. The old method of the application of the *vis a fronte*, by traction on the cord, and Credé's method of the application of the *vis a tergo* by expression, should be combined.

DR. JAMES R. CHADWICK, of Boston, said it was impossible to formulate a universally applicable rule. The treatment during the first two months should be governed by the history of the case. If the woman was a "bleeder," immediate operative interference should be instituted; if she had had previous abortions, it was advisable to temporize. Placental forceps were absolutely worthless; the best instrument for the removal of the secundines, as insisted upon by Dr. Sinclair, of

Boston, was the finger. The finger was also the best dilator.

DR. GREEN, of Kentucky, pursued the intermediate course, as illustrated by the history of a case of abortion in the fourth month, with retention of fœtal envelopes.

DR. SINCLAIR, of Boston, agreed with Dr. Chadwick that manual dilatation of the cervix is the best method. When the os is contracted, the fibres will usually yield to the finger in from six to eight minutes. He is in favor of immediate removal of the secundines.

DR. CARROLL, of Texas, referred to the fact that the retention of a small shred of decidua or of a clot of blood is sufficient to cause alarming hemorrhage. He would not hesitate to use an Ellinger's dilator in case of non-dilated cervix, but thought the finger a better instrument.

DR. WATHEN closed the discussion by saying that he advised the use of his own modification of Scanzoni's dilator only in extreme cases in which the finger had already been employed without effect.

DR. W. W. POTTER, of Buffalo, N. Y., reported the following case of

PARAMETRIC ABSCESS:

Mrs. B., 38 years old, the mother of three children, experienced sudden pain, 17th March, 1874, in the region of the right ovary, accompanied by nausea. On vaginal examination, the right broad ligament was tender. Temperature 101°; pulse 110. Hot vaginal douche, morphine and atropine hypodermically, quinine per rectum, were suggested. The symptoms continued unabated until the 28th, when she was etherized. An incision was made into the cul-de-sac of Douglas, per vaginam, and three pints of fetid pus liberated; a drainage-tube was inserted. The cavity of the abscess was washed out with antiseptic solutions of the bichloride of mercury and carbolic acid. The condition of the woman continued to be desperate until an emulsion of iodoform was injected, when she began to improve, and was restored to her original condition about May 1st, thirty-three days after the operation.

Dr. Potter called attention to the following points of interest in connection with the case:

1. The rapidity of the formation of the parametric abscess in the non-puerperal state. 2. The rapid closure of the abscess cavity by granulations. 3. The large amount of pus (three pints) evacuated. 4. The beneficial effect of the iodoform emulsion. 5. The possible influence of cotton-root and gin, advised by a friend of the patient, as an etiological factor.

After a careful review of the pathology and etiology of abscess in the pelvic connective tissue, Dr. Potter advised the vaginal operation for the evacuation of pus, the cleansing of the cavity by the curette, as suggested by Byford, when necessary, and subsequent daily irrigation of the abscess cavity by the physician himself.

CHRONIC PERIUTERINE ABSCESS: ITS TREATMENT BY LAPAROTOMY,

was the title of a paper by DR. CHRISTIAN FENGER, of Chicago, which in his absence was read for him by Dr. W. W. Jaggard, of Chicago. It was based upon the observation and treatment of three cases of chronic periuterine abscess.

I. Technique of the Operation.—Before making the abdominal incision, the site of the bladder should be marked out by the introduction of a sound. If adhesions have formed between the sac and abdominal wall, the operation is extraperitoneal and simple. Such cases are exceptional. In the majority of cases, when the abscess is lateral or posterior to the uterus, it can be reached only by opening the peritoneal cavity—that is, by laparotomy, for which preparation has always to be made, since it is impossible to make a clear diagnosis beforehand as far as this point is concerned.

When the abdominal cavity has been opened, it is usually possible to come right down on the sac of the abscess. If covered by omentum or intestines, these have to be pushed aside, and all possible adhesions ligated or detached. The upper surface of the sac, together with the uterus and appendices, will generally form a convex, red, smooth, more or less regular tumor, to the side of which, outward toward the brim of the pelvis minor, loops of intestine or omentum generally adhere; as it is not desirable to extirpate the sac, these parts need not be disturbed, if only a surface of two inches in diameter is clear—that is, space to admit of a sufficient opening being made into the sac, and of a sufficient margin round the opening for a double row of sutures to unite the edges with the anterior wall of the abdomen. When the upper surface of the sac is thus clear, or has been cleared, the next step is to find some way into the sac, with due regard to the prevention of the escape of pus into the abdominal cavity. To this end, it is necessary to pack two or three large disinfected sponges around the sides of the cleared space, at the same time preventing any loops of intestine from slipping out through the abdominal incision.

As a soft or fluctuating point on the surface of the tumor, especially when the abscess communicates with the rectum or bladder, or, more rarely, with some remoter part of the intestinal canal, cannot always be found, an exploratory puncture with the needle of a hypodermic syringe has to be made, at the point and in the direction where, from the previous examination, we expect the abscess to be, or where the tumor feels less resistant than in other places. If pus is withdrawn, proving the existence of an abscess, it is advisable to effect as perfect an evacuation of the contained pus as possible. An aspirator should be ready, so that the aspirator needle may be introduced along the needle of the hypodermic syringe, which is left in the cavity as a guide.

The aspirator needle is left in the cavity as a guide for the knife in the incision into the sac. This incision should be made by the thermo-cautery; the small, knife-shaped burner of Paquelin answers the purpose very well. It is well to have a small sponge ready to thrust into the sac as soon as the incision is made, because some pus is likely to flow out as soon as the sac is opened. The edges of the incision are firmly grasped with the large artery forceps of Billroth, and dragged forward to check hemorrhage; sponges, saturated with ten per cent. solution of zinc chloride, may be introduced into the cavity; or, if necessary, the inside of the cavity may be scraped out with the sharp spoon or curette (Byford).

If counter-opening is desired, a strong curved forceps should be pushed down to the bottom of the sac till it can be felt through one of the vaginal cul-de-sacs,

through which an incision is then made, by one of the assistants on the end of the forceps. The forceps is then pushed through the opening, and opened so as to dilate the latter. A heavy drainage-tube is now grasped by the jaws of the forceps and drawn up from the vagina through the sac and out of the abdominal incision.

The next step is then, after carefully cleaning the peritoneal surface of the sac, to unite the latter to the part of the abdominal wound nearest to it by a double row of sutures. Silk is used for sutures. The deeper row, about one-quarter of an inch from the edge of the opening into the sac, and not penetrating the whole thickness of the wall of the latter, unites the peritoneum of the sac with the peritoneum of the anterior wall of the abdomen. These sutures must be sufficiently near to each other (less than one-quarter of an inch apart) to close up the peritoneal cavity hermetically. The outer row of sutures passes through the entire thickness of the abscess wall, along the incision into the sac, and through the whole thickness of the abdominal wound, thus uniting the edge of the skin with the inner wall of the abscess cavity.

The question as to whether or no drainage-tubes should be inserted into the abdominal cavity, depends entirely, as in all other laparotomies, upon the amount of detached adhesions. But in laparotomy for abscesses, it is more desirable not to have a drainage-tube in the abdominal cavity, because of the danger of secondary infection from the fetid abscess cavity through the abdominal drainage-tube, as it is practically impossible to effect a perfect seclusion between the abdominal tube and the tube leading into the abscess. Such a necessity may, however, arise, and then the best course possible under the circumstances is to be pursued.

Heavy antiseptic dressings should be applied over the abdomen, and also an intra- and extra-vaginal dressing sufficient to cover the drainage-tube in the vagina. Iodoform is especially valuable when communication with the rectum makes it possible that feces will come into contact with the abdominal wound. The dressing should be changed at least once a day, and the sac washed out with an antiseptic solution; a saturated solution of boracic acid is preferable, as there is then no danger of poisoning.

The question as to the safety of performing the whole operation at one sitting, in opposition to the method of Volkmann in the treatment of abscesses of the liver (union of the surface of the sac with the anterior abdominal wall, before the sac is opened), will depend, to a certain extent, upon the skill of the operator. Lawson Tait's record of thirty operations, each at one sitting, without a single accident, may be considered as a definite answer.

A tangible difference between a periuterine abscess and an abscess in the liver exists. The liver participates in the respiratory movements; the periuterine abscess does not. The wall of an abscess of the liver is friable, and furnishes a very insecure substratum for the application of sutures, while the walls of the periuterine abscess are thick and solid.

Regarding effective drainage of a periuterine abscess, the counter-opening through the vagina appears inexpedient from the experience of Lawson Tait and the reader of the paper. If, in the course of the after-treatment, rise in temperature and the accumulation of pus in the lower part of the sac should demand it, a counter-opening in the vagina can be made.

II. Laparotomy as Compared with other Operations.—The value of the operation of laparotomy was compared in detail, with Schroeder's vaginal operation in cases in which the circumuterine abscess does not point downward, and, in fact, does not point anywhere. After a careful discussion of the advantages and disadvantages of both methods, the author of the paper was very decidedly of the opinion, advanced by Lawson Tait, that in circumuterine abscesses, which can only be reached from vagina or suprapubic region, laparotomy is the operation of election.

III. Points in Diagnosis.—Bandl is hardly, correct when he states (Die Krankheiten der Tuben und die extrauterin Schwangerschaft) that the diagnosis of suppuration and formation of abscess in the pelvis is generally not difficult because they are indicated by increase of evening fever, rigors, and nightsweats. The author has twice observed cases in which, without fever, rigors, or nightsweats, more than one pint of pus was present. Exploratory puncture through the vagina, by means of a fine aspirator needle, while not entirely harmless as insisted on by Dr. Emmet, gives reliable information, and is comparatively safe.

Exploratory laparotomy is preferable to suprapubic exploratory puncture. The escape of one drop of pus into the peritoneal cavity may be sufficient to start up a general acute peritonitis. Especially is this means of diagnosis advisable when a suprapubic tumor is recognizable.

In the author's three cases the abscess had ruptured into the rectum, and the diagnosis was simple.

It is dangerous to wait too long in cases of suspected periuterine abscess on account of the danger of amyloid nephritis. In conclusion, the author paid a compliment to Lawson Tait, the first advocate of free laparotomy in cases of this kind.

DR. ENGELMANN, of St. Louis, thought that Dr. Emmet very correctly laid stress upon the fact that inflammations of the pelvic connective tissue were not confined to the puerperal state. As regards operative procedure, laparotomy ought to be the *last* resort, but not a *late* one. It is frequently impossible to make a diagnosis before the exploratory incision is made. He had lost one case from septicæmia in his earlier practice as the result of the imperfect *technique* of the operation.

DR. GORDON, of Portland, Me., thought that in from one-half to two-thirds of all cases of pelvic cellulitis the physician is responsible for the production of the condition. The introduction of the uterine sound, application of iodine, nitrate of silver, and carbolic acid to the endometrium were apt to injure the genital structures if not carefully performed. Prophylaxis was more important than cure.

DR. REED, of Ohio, thought Dr. Gordon's statement entirely too sweeping. He narrated the histories of three cases occurring in his own practice; two died; one made an incomplete recovery.

DR. QUIMBY, of New Jersey, had one case in which the diagnosis was obscure. Dr. Gordon Buck's operation—incision from anterior superior spinal process of ilium to Poupart's ligament, introduction of finger under the ligament, introduction of pledget of lint—was performed, and the patient recovered.

DR. CARROLL, of Texas, desired to enter a protest against Dr. Gordon's etiology of pelvic abscess; it may be so in Maine, it is not the case in Texas.

DR. W. W. JAGGARD, of Chicago, referred to Dr. Byford's criticism of Dr. Fenger's operation. When an abscess discharges through the rectum it is usually possible to dilate this orifice so as to secure free drainage. The communication between abscess and bowel could be dilated with the finger or cut. Schroeder has operated successfully in cases of chronic periuterine abscess, after perforation of the bladder, by the high section.

DR. SUTTON, of Pittsburg, closed the discussion. He had recently performed laparotomy for pelvic abscess, and the patient recovered. In cases in which the walls of the cavity cannot be united to the anterior wall of the abdomen, it is advisable, after evacuation and scraping of interior, to fill with iodoform and close. As regards the diagnosis, if no dull space exists above the symphysis always try aspirator needle.

DR. GEORGE F. FRENCH, of Minneapolis, read a paper entitled

HOW SOON AFTER EXPOSURE TO SEPSIS MAY THE ACCOUCHEUR RESUME PRACTICE?

The term puerperal fever embraces a group of essentially diverse affections, some of which are non-contagious; but the septicæmic variety of the disease is that which alone engages us in this discussion, and he expressed the belief that the evidence that this fever is caused by the contagia of erysipelas, scarlet fever, and septic dirt, is as demonstrable as any proposition of Euclid. In order to obtain all possible light on the duty of the practitioner to the obstetric patient, he addressed, in October last, letters of inquiry to some of the most distinguished medical men in this country and in Europe, of which the ollowing is the substance:

"How soon after exposure to sepsis, may the accoucheur safely resume practice? My purpose is to controvert the opinion which obtains in the profession, that time is an essential element in the cleansing process. I have had an experience which emboldens me to make abdominal section on the day following exposure. I greatly desire to know whether your own experience warrants me in pursuing such a course."

In reply, Thornton, Savage, and Hegar write that they believe time is essential—to be accompanied, of course, with careful cleansing. While Emmet, Battey, Marcy, Goodell, and Thomas in our own country, with Martin, Schroeder, Nussbaum, Volkmann, and Esmarch in Europe, write that they believe time to be entirely non-essential and that thorough disinfection can be at once accomplished. The present weight of evidence goes to show that the materies morbi of contagion is a non-gaseous particle, capable of being acted upon and demonstrably susceptible of destruction. Some kinds of contagia have been isolated and their property of self-multiplication demonstrated. It has been exactly determined how such contagia are affected by different agents. The presence of other contagia is inferred from analogous diseased conditions and by disinfecting the supposed source of this latter contagion the morbid effects have been interrupted. Experiments show that the resting spores of the bacilli, the most difficult to destroy of all forms of life, can be killed by a corrosive sublimate solution 1 : 5000.

Fermentation and putrefaction occur only when the specific germ lives—and filth undergoing fermentative change is most conducive to the spread of infectious diseases. Particles of contagia most frequently find lodgement on our hands and particularly under the finger-nails. It is always possible after the ordinary use of a nail-brush or knife, to remove particles of dirt in which the microscope reveals living germs of possible infection. On this account he cuts his nails short and swab under them with a blunt instrument covered with cloth and wet with some disinfecting liquid. He formerly used for this purpose 5 per cent. carbolic acid, but this made the flesh crack—so he now uses instead corrosive sublimate solution 1 : 2000. For hang-nails, cracks, and abrasions he uses collodion.

All instruments are kept scrupulously clean as well as disinfected, and the nurse is regarded as one of the instruments. The June number of the *Centralblatt für Chirurgie*, of 1880, contains a most impressive contribution to this subject by Volkmann. In his letter to me, dated Halle, Dec. 5, 1884, he says: "I hold the same views to-day as at that time. A surgeon who disinfects himself well, can, immediately after making a post-mortem, undertake any operation known to surgery. Every morning from six to eight during the summer I am obliged to give the students operations on the cadaver; and from ten to three I am busy in the hospital, operating, and dressing wounds. I have never yet infected a patient. In the winter I have no operations on the cadaver. Comparing my results in the clinic, I can assure you that the mortality in summer is not greater than in winter."

To show his confidence in the possibility of absolute disinfection, he made the following experiments.

June 21, 1884, after laying open a dissecting abscess of the thigh in a pyæmic patient, and stripping the limb with both hands till they were offensively drenched with the pus, he carefully disinfected himself, and three hours later attended Mrs. M. in confinement.

July 22, in dealing with a case of pyonephrosis, before penetrating the kidney he came upon a foul perinephritic abscess. Passing through this the kidney was incised, explored, and its grumous contents scooped out with the finger. The hand was so long engaged in this work, that a more complete purulent saturation could hardly be conceived. In the afternoon of the same day he confined the wife of a physician, having stated to him the full extent of his morning exposure. In both cases the convalescence was perfectly normal.

Feb. 11, 1885, he purposely infected his index finger with the ichor of an erysipelatous case and after a corrosive sublimate washing, inserted it in a fresh wound from which he had just excised a tumor. He might multiply instances of this kind. The following characteristic letter, received from Prof. Esmarch, epitomizes the subject under discussion.

"If you have thoroughly disinfected yourself, you can immediately enter upon obstetric practice. Time does not destroy septic dirt."

DR. S. PAINE, of Texas, reported

AN INTERESTING CASE OF SUBSEROUS FIBROID TUMOR OF THE UTERUS.

The patient, white, forty-three years old, native of Louisiana, began to have pains in the abdomen and

pelvis about two years ago; menorrhagia and leucorrhœa. A tumor was demonstrable, which grew so rapidly that all the abdominal viscera were encroached upon, and respiration was interfered with. The diagnosis of subserous fibroid tumor of the uterus was made. Squibb's aqueous extract of ergot, rubbed up in glycerine and water, was exhibited in large quantities, through one year, hypodermatically, with the effect of causing almost entire disappearance of the swelling. As much as ten grains, three times daily, were exhibited. No tendency to spasms, gangrene, or other expression of ergotism, was observed. The cardiac rhythm was slowed.

DR. NELSON, of Chicago, thought that Dr. Paine's case could be multiplied. Before the formation of omental adhesions ergot will, in many cases, control the growth of the tumor. The great mistake in the exhibition of ergot is that it is generally given in too small doses through too short a period of time.

WEDNESDAY, APRIL 29TH.—SECOND DAY.

DR. R. J. NUNN, of Savannah, Ga., read a paper on

THE MULTIPLE SPECULUM UTERI, AND AN IMPROVED DRESSING FORCEPS.

The speculum is of the antero-posterior bivalve variety, like Cusco's; it has the extension motion of Graves's, and, like it, can be reversed for a Sims's. The upper blade consists of two superposed leaves capable of lateral motion. Two lock-nuts fix this blade immovably in any position when such fixation is desirable, as when using the instrument as a Sims's. The arrangement of parts adopted gives great powers of expansion and self-retention.

The dressing forceps has a downward and backward curve in the direction in which the jaws open. It has a spring catch, forming a useful polypus forceps, etc., and between the pivot and the jaws the shank of the forceps is formed into a scissors.

DR. S. M. HEALEY, of Cumberland, Md., then described

A NEW SPECULUM AND A NEW VAGINAL IRRIGATOR.

The speculum is a self-retaining Sims's speculum; it is secured *in situ* by a sacral pad, with bands of steel, connected together by ball-and-socket joint. The instrument was applied to a patient in the presence of the members of the Section.

The vaginal irrigator is a long, conical, corrugated glass tube, with a rubber diaphragm, containing two perforations for the insertion of a delivery and an escape tube.

DR. GEO. J. ENGELMANN, of St. Louis, read a paper on

THE IMPROVED TECHNIQUE IN GYNECOLOGICAL OPERATIONS, MINOR AND MAJOR.

He called attention to the various models of Simon's specula, as more efficient instruments for operation in the lithotomy position than the instrument of Sims. He employs continuous irrigation with hot water, 115°–125° F., during all his operations. He uses semicircular needles and strong silk thread, which has been disinfected. The operative *technique*, thus briefly sketched, has received no mention in any American text-book. Dr. Engelmann claims the following advantages for this method:

1. Cleanliness, or asepsis. 2. Field of operation is clear. 3. Rapidity of operation. 4. Hot water acts as an efficient hæmostatic.

The irrigation with hot water is an idea of his own, and he has used it for seven or eight years. The method of operating, with the exception of the hot water, is that extensively practised in Europe.

DR. HENRY O. MARCY, of Boston, read a paper on

THE "ROLE" OF BACTERIA IN PARTURITION,

the underlying thought of which was that normal labor is a physiological process and as such aseptic, hence antiseptic injections are unnecessary, and, beyond the securing of cleanliness, meddlesome and dangerous. When the labor departs from the normal character, then new factors are introduced. In instrumental labors, and where the hand is introduced into the cavity of the uterus, exposures are of necessity not unlike those incidental to any surgical operative procedure. The uterus in most labors is subject to lesions where infection may easily be superinduced and when thus infected, Dr. Marcy showed that the puerperal state made most favorable conditions for rapid development of microörganisms, a favorable soil for growing most dangerous seed. He laid the utmost emphasis upon the use of all antiseptic precautions, and urged precisely the same thoughtful attention to all details as in a major surgical operation.

DR. HEALEY, of Maryland, held that sepsis occurs in every labor, and milk fever was evidence of the fact.

DR. GORDON, of Maine, said that he did not believe in antisepsis, but he did believe in cleanliness. Lister had recently lost two cases from septicæmia. Cases of poisoning from carbolic acid and the bichloride of mercury had been recently reported. He was known as the hot-water surgeon, on account of the frequent employment of large quantities of that agent. He had no objections to hot vaginal injections after parturition, on general principles; he did object to medicated solutions.

DR. ALEX. J. STONE, of Minnesota, thought that Dr. Marcy misrepresented Dr. Thomas in the statement with reference to the sites of purulent resorption. The placental area, the cervix, and the vulvo-vaginal canal were the regions through which the resorption of pus usually occurs. Extensive lacerations of the cervix occur quite as frequently among multiparæ as in primiparæ.

DR. HUNTER, of Minnesota, closed the discussion by saying that it was too late, at the present day, to appeal to the *vis medicatrix naturæ*. The experiments in the cultivation of germs, and the clinical observations in Vienna, Prague, Berlin, and other large cities, established the prophylactic value of antiseptic injections beyond peradventure of doubt.

DR. A. REEVES JACKSON, of Chicago, read a paper entitled

VAGINAL HYSTERECTOMY FOR CANCER.

A surgical procedure, to be beneficial, should relieve suffering and prolong life. If it fail to effect either of these results, it is useless. If it destroy more lives than it saves, it is injurious, and should be abandoned.

A table based upon 256 cases of vaginal hysterectomy, compiled by Dr. P. F. Mundé, showed a mortality of only 24.6 per cent.; while the results of the operations

performed by Martin, Schroeder, and Ohlshausen, *all of whose cases are published*, show a much higher rate of mortality, namely, 38.6 per cent. in 101 operations. This discrepancy is explainable by the fact that such tables as that of Dr. Mundé are based upon incomplete returns—the successful cases being published, and the unsuccessful ones suppressed. Figures will not lie if they have a fair chance. If the whole truth in relation to this matter were known, the mortality of the operation would be found much greater than it now appears. Taking even the foregoing most favorable report, vaginal hysterectomy has actually destroyed nearly one hundred years of life. If all the cases were published, the amount of destruction would appear much greater. There is nothing to offset this. It has yet to be shown that a single life, otherwise doomed by the disease, has been saved by the operation. The history of the operation does not afford ground for hope that improved methods in its performance will materially better the results. Schroeder's greatest success was obtained in his first 8 cases, with a mortality of 8.7 per cent.

The dangerous character of the operation is not the gravest charge against it; it does not benefit those who recover. The disease recurs in all, sooner or later, and their sufferings, which have at best only been interrupted, are as severe as before. In short, the patients gain nothing, and die, on the average, sooner than if let alone.

Of all the methods of treatment which have been used for uterine cancer, hysterectomy has given the worst results, both immediate and remote; and the statistics seem to show that it has killed more rapidly than the disease itself.

Schroeder, Mundé, and others think that vaginal hysterectomy should be restricted to cases in which the cancer is limited to the cervical mucous membrane, or to the body of the uterus. These limitations are proper, but impracticable. It is impossible, in the present state of our art, to make the subtle diagnostic distinctions which they imply. There are no means by which the extent of cancerous involvement can be known in any given case. The unreliability of Schroeder's method by digital touch alone, is shown clearly by the rapid and numerous recurrences of the disease which have followed his own operations.

When cancer affects the cervix uteri, extirpation is improper because unnecessary. Supravaginal amputation, with a mortality only one-fourth as great, does all that can be done by total removal.

The diagnosis of cancer of this body is always difficult, and frequently impossible in the only stage in which extirpation can be proper or useful. Here, too, the disease is of much longer duration and less painful than when it attacks the cervix, so that a highly perilous operation is not justifiable. The so-called "palliative" operations are not only less fatal in all forms and locations of the disease, but more lasting in their good results than the "radical" operations.

Conclusions: 1. Any operation for cancer which does not completely remove the disease will be followed by recurrence.

2. During life the diagnosis of the extent of cancerous disease originating in any part of the uterus is at present impossible, hence no operative procedure can afford a guarantee of complete removal.

3. In view of this necessary doubt, no operation is justifiable which greatly endangers life, provided other and safer methods of treatment are available.

4. Vaginal hysterectomy has sacrificed the lives of more than one-third of those who have been subjected to it, the mortality of the operation when done by those of greatest skill and experience being over thirty-six per cent.

5. Other methods of treatment, attended by not more than from one-sixth to one-fourth the mortality of vaginal extirpation are equally efficient in ameliorating the symptoms and retarding the progress of the disease, and these have been followed by as good or better ultimate results. Hence they should be preferred.

6. Hysterectomy does not avert or lessen suffering; it destroys and does not save life. It is, therefore, not a useful but an injurious operation, and being such, it is unjustifiable, and ought to be abandoned.

THURSDAY, APRIL 30TH.—THIRD DAY.

DR. W. W. JAGGARD, of Chicago, read a paper on

THE RING OF BANDL.

Conflicting views as to the changes which occur in the cervix uteri during pregnancy and labor have been urged from the latter part of the eighteenth century up to the present day.

The object of the paper was to sketch very briefly the outlines of our knowledge upon this important subject, especially since the views of Bandl have been grossly misrepresented. The old theory, of Roederer and Stein, Sr., displaced by the doctrine of Stoltz, in 1826, is coming to the front again, as the result more particularly of the anatomical studies of Braune and the researches of Bandl. Bandl's doctrine is substantially that promulgated by Carl Braun, in 1857. Professor Sales, in 1869, 1874, and 1877, approximates the position of Braun, Braune, and Bandl.

It is inconceivable that the little, thin-walled, nipple-like process, the cervix of Müller, could be so distended as to receive the entire head of the child, as shown in Braune's drawing, and still be capable of functional activity. If this proposition is regarded as demonstrated, the greater part of the cervix, as shown in Braune's drawing, must have been filled out by the egg during pregnancy, and the cervix of Müller must play a very insignificant rôle. The cervix of Müller forms a part, from two-fifths to one and one-fifth inch long, from the os externum upwards, of the cervix of Braune. The cervix, as shown by Braune's drawing, is the lower segment of the uterus of the older observers, plus the little tube described by Müller. After a careful review of recent evidence upon the topic, Dr. Jaggard said that it is impossible, in the present state of our knowledge, to assert dogmatically that the ring of Bandl and the anatomical internal os are identical, but that the weight of probable evidence, at present at our command, is very decidedly in favor of such a view.

DR. GUSTAV ZINKE, of Cincinnati, then read a paper on

EMMET'S OPERATION: WHEN SHALL IT AND WHEN SHALL IT NOT BE PERFORMED?

He summarized his conclusions as follows:

1. It is evident that the operation has been performed unnecessarily for symptoms similar to but other than

those arising from lacerations of the cervix. Further, that it has been done imperfectly, even without preliminary treatment, in many more; and the failure to give relief, as reported by several, is due to these two causes.

2. That from our present knowledge we cannot, at this time, arrive at any definite conclusion, from the fact that many of the so-called consequences of lacerations of the cervix uteri are not settled beyond doubt.

3. That every one engaged in this department should carefully select his cases, and try every known means to give relief before resource is had to operation.

4. The operation should never be performed *eo ipso* in cases of simple fissures or lacerations of first and second degree.

5. In cases of eversion and disease of the cervical or corporeal cavity, or both, although attended by hyperplasia and displacement, it has been observed that all the symptoms abated and the parts returned to their natural condition, and that no laceration was discoverable after alleviative measures were instituted first, which alone caused the parts to return to a normal condition.

6. There are some cases of extensive lacerations of cervix that seldom give rise to any inconvenience, and that, therefore, an operation should be deferred until symptoms arise that will call for its performance.

7. The operation, although indicated, should never be performed until, by preparatory treatment, the parts have been brought into a healthy condition.

8. Near, and during, the climacteric period the operation should be postponed as long as possible, and the patient not exposed to any risks, since in many cases all the symptoms subside under proper treatment, and never return on account of senile involution.

9. The operation is justifiable in cases of lacerations of the third and fourth degree, without complications, if there is a history of malignant disease in the family.

10. The operation may be performed with perfect propriety in young women, as a preventive, if the laceration is bilateral and extends up to the cervico-vaginal junction, or beyond it, even though there are no pathological changes; indeed, it seems to be the duty of every one who observes a lesion to that extent, to urge the operation.

11. The operation is justifiable in any degree of laceration, and in rare instances even in fissures, when there exist cicatricial tissues, productive of reflex disturbances, annoying in character, and not tractable to any other treatment.

12. The operation is absolutely indicated in all extensive tears of the os, in which the cervix is everted, its mucous membrane and Nabothian follicles diseased, and especially if there be granular or cystic degeneration present, provided, the parts have first been restored to a healthy condition by palliative treatment.

DR. HARVEY, of Indiana, said there was frequently very much less pain in extensive than slight laceration. When there is extensive eversion, the parts are covered in time with cicatricial tissue, and are relatively non-sensitive. When a fissure exists in the cervix, it is productive of much the same reflex symptoms as a fissure *in ano*. Moreover, while upon a cursory examination, the laceration may be apparently slight, if the lips are everted it will be found that the laceration has taken on larger proportions higher up. For these cases of slight lacerations—fissures, so to speak—cauterization and deep incision will not suffice; they require Emmet's operation.

DR. WATHEN, of Kentucky, said each case must be an individuality. The preparatory treatment is the best test as to the urgency of the indication for operation. Some cases do not require operation; such cases are cured by the preparatory treatment.

DR. GORDON, of Maine, said that Emmet had made the remark over and over again that epithelioma of the cervix had never occurred in any of the cases coming under his observation without an antecedent laceration. But, although admitting laceration to be a potent factor in the production of cancer, he did not advise closure of the laceration in every case, irrespective of its condition. Dr. Emmet was clearly inconsistent. Dr. Gordon had operated 225 times, with 1 death. He agreed with Dr. Harvey in his remarks. Dr. Gordon does not believe in such long preparatory treatment; as said by Peaslee, chronic inflammation is a misnomer. Inflammation is a process rarely lasting over seven or eight days; subsequently, there exist the products of inflammation merely—*i. e.*, chronic congestion. He had treated successfully cases refused admission at the Woman's Hospital of New York, because there was too much inflammation.

DR. KING, of Missouri, thought there was greater danger of the development of cancer in case of slight lacerations than in larger ones.

DR. CARSTENS, of Detroit, thought that all lacerations should be operated upon. An ulcer on either lip of the buccal orifice is excised if it does not heal spontaneously; the same line of reasoning ought to apply to lacerations of the cervix.

DR. BATTEY, of Georgia, was never impressed with the opposite character of the argument which would unite laceration of the cervix and epithelioma as cause and effect: with equal force, labor itself might be urged as a factor in cancer. He had seen extensive lacerations cured by local treatment.

DR. SUTTON, of Pennsylvania, said that he had operated in cases of lacerated cervix merely to satisfy the patient. Epithelioma occurred in the cervices of virgins; he had seen numerous cases of this kind in Marten's clinic at Berlin.

DR. S. C. GORDON, of Portland, Maine, read a paper entitled

REASONS FOR AND RESULTS OF SOME CASES OF TAIT'S OPERATION.

At the last International Medical Congress, Sir Spencer Wells, in commenting upon a paper presented by Koeberle, of Strasburg, said: "As to castration of women for nervous diseases, we might just as well go about the country cupping men for similar diseases as to do what is being done, in removing ovaries of women." In reply to Dr. Gordon's direct question, he said, "I believe that in no case should the ovaries of a woman be removed unless we can demonstrate beyond all doubt that there is actual disease." In reply to the question, "Do you mean by demonstration only that which can be made by touch?" he said, "Yes, most emphatically." Dr. Gordon then related detailed histories of several cases in which one or both ovaries or

tubes had been removed. Improvement of all symptoms was observed in each case and in some of them a radical cure was effected. Dr. Gordon concludes that a close analysis of subjective symptoms, through a long period of time, is frequently adequate to establish the diagnosis of disease of ovaries and tubes, and indicate operation when absolutely nothing of a positive character can be ascertained by physical exploration. Sir Spencer Wells's well-known aversion to Mr. Lawson Tait probably influences his judgment to an undue degree. Some of these subjective signs are premenstrual pain, irregularity of menstrual function, alternate pallor and flushing of face, an extraordinary mahogany-bronze color of the complexion resembling that of Addison's disease. Dr. Gordon observes no antiseptic precautions. He is clean, and uses hot water.

DR. B. E. HADRA, of San Antonio, Texas, presented a paper entitled

INTRAPERITONEAL ADHESIONS CONSIDERED IN RELATION TO BATTEY'S AND TAIT'S OPERATION.

He concludes from the detailed consideration of four cases, taken as types, that intraperitoneal adhesions may exist high up in the abdominal cavity, between various portions of the intestines, and that in all cases of abdominal section, after examination of the uterus and annexa, the hand should be made to search for such adhesions.

DR. BATTEY, of Georgia, thought that any aversion to Lawson Tait upon the part of Sir Spencer Wells would not influence his judgment. Both Sir Spencer Wells and Mathews Duncan had told him in London, a few months since, that the scope of Battey's or Tait's operation is limited; the former operator had seen but two cases, the latter but one case, in which the operation was deemed expedient.

It is necessary, in estimating the results of the operation, to allow a sufficient interval of time to elapse. The immediate effect is always favorable. Almost any operation which draws blood will do the patient, if she is a woman, good. But then there comes a reaction, and she feels the improvement is imaginary. Cheer her up. Wait for the expiration of one and a half to two years before reporting your cases. The results of the operation are uniformly favorable.

With reference to the introduction of the hand to search for adhesions, as suggested by Dr. Hadra, he had little doubt that some good is effected. But this may arise from (1) traumatism, (2) imagination, (3) the actual severing of incarcerating bands. These bands, however, may form again.

DR. SUTTON, of Pennsylvania, called attention to the importance of always telling the patient that merely an exploratory incision is to be made, and then of being prepared for any emergency that may arise.

DR. HARVEY, of Indiana, called attention to the influence of Battey's and Tait's operation in causing involution upon chronic hypertrophy or hyperplasia of the cervix, and indeed of the *corpus uteri*.

DR. WATHEN, of Kentucky, thought that the line of diagnosis advocated by Dr. Gordon is pernicious in its tendencies. Objective diagnosis is more reliable, although it must not be relied upon exclusively.

Adjourned.

AMERICAN SURGICAL ASSOCIATION.

Sixth Annual Session held in Washington, D. C., April 21, 22, 23, 24, 1885.

(Specially reported for THE MEDICAL NEWS.)

FRIDAY, APRIL 24TH.—MORNING SESSION.

FIRST in the order of exercises was the discussion of the paper of Dr. Senn, entitled

AN EXPERIMENTAL AND CLINICAL STUDY OF AIR EMBOLISM.

DR. J. COLLINS WARREN spoke in strong terms of admiration for the labors of the author, and particularly upon a subject of so great importance as that of air embolism. He, however, thought the subject of greater importance in a practical sense to the obstetrician than to the surgeon. With regard to the cause of death, various theories have been advanced in addition to that adopted by Dr. Senn, but he thought it sufficiently explained by calling it an inflation of the right side of the heart. The phenomenon has been compared to fat emboli, and the cause of death attributed to the action of the air in the capillaries of the lungs. The comparison is not a proper one, however, because we may have the lungs well filled with fat emboli with very little disturbance to the circulation. One lung may be almost filled with an exudation, as in pneumonia, without producing the death of the individual. But when the heart has in its cavities a substance like air, which it is unable either to compress or expel, it must immediately become exhausted. A large amount of air may be introduced into the circulation if it be done slowly so as to allow it to form a froth with the blood. He had once opened a vein while operating upon the neck, and had distinctly heard the hissing sound of air entering the vein, but no evil symptoms followed. The danger is greater when a large vein or sinus is opened and a larger amount of air permitted to enter in a short time. In operating in the axilla, he had noticed a sound made simply by the suction of air into the loose cellular tissue of the region, which so closely simulated the sound of air entering a vein that he was at first confused. Speaking of the erect posture as favoring the entrance of air, he recognized the authority for such a suggestion, but thought a much more plausible cause is the tension of the respiratory muscles produced when the patient experiences pain and takes a sudden deep respiration. As an illustration of the ease and rapidity with which air may be forced into the circulation, he cited the case of a woman who applied to an abortionist in Boston. An instrument was introduced into the uterus and air pumped through it, causing death in fifteen minutes. The autopsy revealed the right side of the heart full of air. Air was also found in the capillaries of the lungs as well as in the capillaries of the general arterial system. In such a case the air is very readily drawn into the enlarged uterine sinuses by the ordinary movements of respiration.

DR. GORDON, of Portland, Maine, reported a case in which air was introduced into the circulation in the operation of aspirating a pelvic abscess. Before coming under his care, the abscess had been twice aspirated without the discovery of pus. He, however,

succeeded in withdrawing a large amount of pus at the first aspiration, and repeated the operation a week after, with the same result. The aspirator that he used was one with a bottle attached to act as an exhaust-chamber, capable, as he remarked, of killing at either end. The bottle could be either filled or emptied according to the direction in which the stopcock was turned. When the third aspiration was about to be made, the operator was assisted by a young and inexperienced resident physician, who attended to the preparation of the instrument. Instead of exhausting the chamber, he had charged it with air. After the introduction of the needle, the stop was turned; the woman instantly gave a scream, put her hand over the region of the heart, and in a minute was dead. Just what occurred, it was impossible to tell, no autopsy being permitted. It was probable, however, that the cavity of the abscess having been previously nearly exhausted, the enlarged veins of the vicinity had been left with their mouths nearly or quite open, so that with the great pressure the air was forced into them. From the rapidity with which death was produced in this case, he concluded that preventive treatment is, in the human subject at least, better than curative, for it would have been impossible to have taken any measure for the restoration of this patient. Again, complete anæsthesia renders the accident less likely to occur, inasmuch as it quiets respiration to such an extent that the aspiratory force is much diminished.

DR. C. B. NANCREDE expressed his admiration for the work of Dr. Senn, and regretted that he had nothing new to offer on this important, but much neglected, subject.

The subject of air embolism is an old one. It was first recorded, however, by Duchenne. The elder Larrey had noticed it several times on the field of battle, from sabre-wounds of the neck. With regard to experiments, it should always be remembered that animals are not human beings. This statement was made without prejudice against experimental investigations, and only in the belief that in some animals death occurs with much greater certainty than in others. The horse was one of the least likely to be killed by air embolism, because of the large size of its pulmonary capillaries. It is an interesting fact, in this connection, that the same quantity of water, if introduced into the circulation, will cause almost as severe symptoms, although these are more likely to pass off after a short time. Again, in the experiments of Dr. Senn and others a much larger quantity of air was introduced than could possibly enter during an operation, hence the results could hardly be compared. Death from a small amount of air is not due, he thought, to paralysis of the heart, but to obstruction of the pulmonary circulation. If, however, a large quantity of air gains entrance to the heart, it is churned back and forth from auricle to ventricle, and does not pass into the general circulation, hence aspiration of the heart cavities may be of benefit in removing the spumous blood. Tension of muscles is capable of holding the mouths of veins open to a greater extent than the tension of fascia, as is the case with the platysma in the neck. A case was then reported of sudden death from air embolism following amputation. The stump had sloughed and gas had developed under the dressing, giving an easy means of its entrance to the circulation. This he considered a mode of death not always recognized. As remarked by the last speaker, the preventive treatment of these cases is of much more importance and more likely to be successful than the remedial, simply because we cannot always be present when the accident occurs, or, if present, it requires some minutes to get an aspirator ready for use. In operations about the axilla or neck, the greatest care should be taken to prevent the entrance of air into the divided vessels.

Should air have entered, what can be done? Experience has shown that if the patient can be kept alive for a short time by artificial respiration, he is likely to recover, and artificial respiration will cause a disappearance of most of the dangerous symptoms. This can be practised in all cases, and it is the most convenient method we have. It should be practised with the patient in the recumbent posture, the head low and the limbs slightly elevated. Where the accident occurs during an operation, the vein should, if possible, be tied; but if this cannot be readily done, a spongeful of water should be squeezed into the wound, and the cardiac action maintained by stimulants. Another remedy of value is the hypodermic injection of atropia, because of its power of enlarging the pulmonary capillaries. In one case he thought the patient had been saved for six days by the administration of this remedy. Patients who have recovered from the accident, however, have all shown symptoms of secondary pneumonia, which has to be treated on the same principles as an ordinary case of pneumonia.

DR. P. S. CONNER, of Cincinnati, then read a paper on

THE ETIOLOGY OF TRAUMATIC TETANUS.

In it were reviewed the various theories that have been advocated as to the cause of the disease, and the leading arguments for and against them. The opinions expressed were mostly conservative, but favor was expressed for the humoral theory.

In conclusion the essayist said, it can only be assumed that it is in the secretion of the wound that the irritant is developed. The idiopathic cases are those the explanation of which is the most difficult upon this or indeed upon any theory. There is abundant material for the chemical development of the poison both in the fluids that are poured out and in the decomposition of the tissues. Even in a physiological fluid—urine—Gautier was able to find a ptomaine capable of tetanizing animals. Does not the danger of a punctured wound of the hand or foot lie in the pent-up fluids rather than in the nerve injury, and should not the pus, the pieces of clothing, the bits of wool, that have been found in some of the reported cases, and not the lacerated nerve-fibres, be considered as the exciting causes? The veins and lymphatics of the nerve themselves may readily be the channels through which the morbific matter may be carried in, and the anatomical fact that a relation exists between the sensibility of a nerve and the number and closeness of its associated lymphatics may go far in explaining why tetanus is so frequently associated with slight wounds of parts endowed with high sensibility, as the fingers and toes.

Is it not then from very careful chemical and microscopic examinations that we may hope to receive the information we desire upon this obscure affection?

Will it prove to be a peculiar toxic material developed in the breaking-down, dying, and dead tissues, or a specific organism that will allay tetanus with anthrax, erysipelas, and septicæmia, an organism entering at the open wound or carried in with the vulnerating body. Whatever it may prove to be, if it is discovered at all, we shall hear no more of hypothetical personal predispositions, or parts of least resistance, and the treatment will be directed either towards preventing the entrance of the microörganism or the sustaining and quieting of the patient until such time as the one shall be eliminated or the other have completed its life-history.

(This paper will be published in full in an early number of THE MEDICAL NEWS).

DR. E. M. MOORE asked the author's opinion with regard to the remarkable prevalence of tetanus a few years ago among boys who used the toy pisiol, and whether he thought it due to a peculiar chemical effect of the fulminate upon the tissues.

DR. CONNER replied that nothing, so far as he was aware, had been given that throws any light upon the subject. All the cases that he had seen from this cause were cases in which there was a considerable amount of contusion and laceration, the wad lodged, and the fluids pent up. In other words, they were cases which lent strength to the humoral theory. In the only case which he was called upon to treat, the injured member was kept constantly under hot water for forty-eight hours and no tetanus had developed.

DR. NANCREDE called attention to the fact that a difference of locality amounting to but a few miles made a great difference in the prevalence of the disease, as had been recently stated by a New York writer. At one point on Long Island the disease is of comparative frequent occurrence, while at a place but a few miles distant it is practically unknown under any circumstances. This could be best explained, he thought, by reference to the humoral theory.

DR. T. F. PREWITT did not consider the experiments of Arloing and Trippier, referred to in the paper, as bearing any evidence against the humoral theory inasmuch as the blood from a horse suffering from tetanus would have to be injected into the blood of another in very large quantity to produce the disease, as would be the case in poisoning by strychnia.

DR. J. EWING MEARS reported a case in which tetanus had developed after amputation of the arm. Post-mortem examination showed that it was due to the inclusion of the median nerve in a ligature. He further expressed surprise at the rarity of the disease as a result of wounds of the hand and foot in the late war.

DR. J. R. WEIST remarked that there was a discrepancy in the statement that tetanus had not occurred as a result of wounds of the hand during the war, as he had observed one case that followed a gunshot wound of the finger, coming on within twenty-four hours after amputation had been performed. During the last year he had seen three fatal cases of tetanus; all were from wounds, two were railroad injuries, and one caused by the falling of a window sash.

DR. L. MCLANE TIFFANY reported that tetanus as a result of toy-pistol wounds had been of remarkable frequence in Baltimore. He thought some importance should be placed upon the part wounded, and this differed with differences of race and other peculiarities; thus, the negro is peculiarly liable to suffer from the disease in consequence of injuries to the head and neck. One of his associates had made a careful chemical study of the fulminate of the caps used in the toy pistols, but had discovered nothing. He had not seen a case of tetanus from this cause that recovered.

DR. MEARS called attention to a case he had reported three years ago, from the toy pistol, in which chemical examination had failed to reveal anything. He considered the frequency of the disease in connection with this accident due to the character of the cartridge used, the manner in which it is placed in the pistol, and the fact that it is discharged in the hand, causing the fragments produced by disrupture of the cartridge to enter the flesh.

DR. DAVID PRINCE advised free incision for the purpose of permitting the escape of discharges and particles of foreign matter.

DR. NANCREDE reported several cases arising from various injuries. Only two cases recovered, and they had been treated by trephining the fractured bone which was the cause of its development, and removing the fragments, the operation being followed up by the administration of large doses of chloral. The child had, however, for several weeks the most pronounced risus sardonicus. The other case recovered after amputation of the finger. He had seen the musculo-spiral, the median, and the radial nerves stretched, with the result of temporary improvement. He had made neurotomy for it with the same unsatisfactory result. He had kept the patient under anæsthetics for hours, alternating between ether and chloroform, when ether seemed to lose its effect. He had seen calabar carried almost too far; everything appeared to give relief. One of his colleagues had obtained a recovery from the inhalation of nitrite of amyl alone. In one case he had seen good results from it, but the treatment was changed without his consent, and the patient died.

DR. T. F. PREWITT reported several cases from the toy pistol. In one case from injury of the right arm he had obtained good results from the administration of large doses of bromide and chloral with five drop doses of Fowler's solution every three hours. In a few days the patient went into a typhoid state, in which he remained three weeks. He had an exceedingly dry tongue, but no diarrhœa. When he recovered it was discovered that the flexor muscles of the left foot were paralyzed. In another case in which the symptoms were mild, the same treatment was employed, and the man recovered. While it was doubtful whether every case could take such large doses of Fowler's solution, he thought a tolerance for it was developed in this disease.

DR. MOSES GUNN reported a case in which stretching of the median nerve was followed by recovery with permanent paralysis. Another case of nerve-stretching was attended by complete recovery. In another case following amputation, the administration of the calabar bean appeared to be the element of cure. It is an old view that if a case can be kept alive for ten days it will recover; looking at this from another view, it is in those cases in which the disease exhibits a milder form and comes on more gradually that the patient lives for ten days and finally recovers. The fatality is in direct ratio to the acuteness of the attack.

DR. T. W. BRIGGS thought there must be in all cases a peculiar predisposition to the disease. When the individual is in that condition, the slightest injury will be followed by the disease. He then reported a case in which the removal of an ulcer of the knee was followed by the disease and death within three days, although the wound had been carefully closed and no cause could be determined.

DR. CONNER, in closing the discussion, remarked that while he did not deny the theory of a predisposition, one fact was opposed to it, and that was that those persons who have the predisposition may be wounded over and over again without the development of tetanus. He thought there was nothing special in the character of the fulminate used in the toy pistol further than that it is a powerful one, driving the wad deeply into the tissues, where it soon becomes saturated, obstructs the discharge of fluids, and affords abundant opportunity for decomposition. It requires but an infinitesimal quantity of the septic matters produced by decomposition to produce the most alarming results. In explanation of the peculiar liability of the negro to contract the disease from wounds of the head and neck, he suggested that there is something peculiar in the free secretions of the skin of the negro that may be more liable to decomposition than those of the white man. Dr. Tiffany had further called his attention privately to the susceptibility of the negro to cerebro-spinal meningitis, a disease closely allied to tetanus. All the statements that had been made, he thought, favored the humoral theory. The cases that recover do so as a result of the administration of remedies which allay the irritability and tide the patient over the period of danger until the spontaneous elimination of the disease may occur. In his experience the disease had followed major rather than minor injuries. With regard to nerve injuries as a cause of the disease, he considered the point made in the paper of importance, namely, that the more sensitive the nerve the greater the lymphatic circulation, and, therefore, the corresponding liability to the absorption of septic matter. In conclusion, he expressed the hope that in the near future investigations will be made toward the discovery of the microörganism to which the disease is due.

Dr. C. T. Parkes, of Chicago, was unavoidably absent and his paper on

A CASE OF CHOLECYSTOTOMY,

was read by Dr. Moses Gunn.

The patient had suffered for several years from severe symptoms of the disease. The general health was, however, good. Some icterus was, however, present, and examination revealed a bulging of the right hypochondrium, due both to distention of the gall-bladder and enlargement of the liver. An oblique incision was made just above the prominence supposed to be the gall-bladder. After pushing aside the enlarged liver, the cyst was found very much distended. The bile was drawn off, an opening made in it, and the edges of the incision stitched carefully to the edges of the abdominal wound. No calculi were found. Four days were allowed to pass before the wound was dressed. It was found then that the enlargement of the liver had disappeared, and probing removed seven calculi. When the wound was next dressed, three days after, five more stones were removed. Three weeks after severe pain and the failure during the interval of the bile to pass into the intestine, rendered a second opening necessary. This time a probe was passed down the common duct into the intestine. After this the stools had a bilious character, and regular recovery followed. Two months later, the fistula had to be enlarged on accont of the recurrence of pain, the calibre of the duct appearing not sufficiently large to permit the proper passage of the bile. In conclusion, the author expressed the opinion that the case had been one of obstruction of the common duct, and that the stones which were found after the operation were not in the bladder but in the ducts, and did not pass into the gall-bladder until its distention was removed.

(This paper will be published in full in *The American Journal of the Medical Sciences* for July.)

DR. MEARS remarked that this disease is more frequently treated by the physician than the surgeon, but he thought the time had come when more attention should be given to the surgical treatment. Cholecystotomy is called for in more affections than those referred to in the paper. There are both intrinsic and extrinsic conditions which call for it; conditions in the gall-bladder and conditions in its ducts. The conditions most frequently requiring operative procedure are chronic inflammatory affections of the lining membrane of the duct; tumors making pressure upon the duct, malignant disease of the structures of the duct and around it; suppuration, the abscess in or around the duct requiring evacuation; and finally, impacted gall-stones either in the bile-duct or in the common duct. The cases that have been reported, which are contained in an article in *The American Journal of the Medical Sciences* for October last, number 35; of these eight or ten died. Stones were not found in all, but other conditions seemed to indicate the necessity of the operation. It is important, he thought, to be sure of the diagnosis before operative measures were adopted. With reference to the point at which the incision should be made, he thought it better not to go so high as in this case, because the tension of the liver on the delicate cyst is too great, and inflammatory conditions sometimes make it impossible to push the liver aside. Some consider the point where the least hemorrhage will occur the best, but the hemorrhage is seldom of any consequence. It was objected that this operation does not give assurance of a permanent cure, but that the disease is apt to return. On this account the entire removal of the gall-bladder has been advised. This is objected to, however, on account of the possibility of the existence of some relation between the presence of the gall-bladder and the discharge of the bile into the intestine, and that the destruction of this relation is apt to cause disturbance of considerable severity.

DR. TIFFANY referred to the difficulties of diagnosis and the frequence of mistakes. Further, it is a matter of interest to study the behavior of an organ when its ducts are occluded by a foreign body. Organs which are bilateral, as the kidney, are much more intolerant of obstructions than those which are unilateral. Where one ureter is obstructed, the opposite kidney is exceedingly prone to take on inflammation, but the duct of the liver, or of the pancreas, may be occluded and the subject live with comparatively little inconvenience.

He considered that catheterization of the gall-ducts promises good results.

DR. PREWITT narrated a case in which he found the patient suffering great pain and in collapse. He could distinctly feel the gall-bladder full of stones through the abdominal wall. The patient died in a short time without recovering from the collapse. In the case of a negro woman the gall-bladder was very large, extending below the umbilicus. He aspirated and drew off a pint of a mucous fluid with very little indication of bile in it. In some cases gall-stones may remain in the gall-bladder for the greater part of the lifetime of the individual, doing very little harm. If they are discovered, he did not advise operation unless they should produce grave symptoms. In one case he had seen a woman who had suffered for years from obscure symptoms which were considered hysterical, in an attack of acute obstruction of the bowels. Operation was proposed and consented to, but before it was attempted the patient went into collapse. The autopsy revealed that a gall-stone had penetrated into the jejunum, causing the obstruction. He further believed the case of Prof. Hodgson, of St. Louis, who died from perforation of the gall-bladder, to have been one of this character, the stone being so small as to escape detection at the autopsy. He opposed the making of too low an incision.

DR. S. W. GROSS had collated 42 cases of operations upon the gall-bladder for concretions or dropsy, an examination of which may prove of interest in our efforts to arrive at correct conclusions regarding the proper management of these conditions.

Of 36 cases of cholecystotomy, 28 recovered, and 8, or 22.22 per cent., died—3 of exhaustion and hemorrhage, 2 of shock, and 1 each of escape of bile into the peritoneal cavity, suppression of urine, and acute peritonitis. He stated that the operators were Tait in 15 cases, Keen in 2 cases, and Kocher, Ransohoff, Gardner, Eddowes, Savage, Bobbs, Sims, a surgeon quoted by Tait, Courvoisier, Trendelenburg, Koenig, Boeckel, Naire, McGill, Meredith, Parkes, Savage, Taylor, and Wright, each in 1 case. In the case of Wright, the patient was thought to be the subject of renal calculus, so that the incision was made through the loin, and a stone extracted from what at first was presumed to be the enlarged ureter. On death from peritonitis, the kidney was found to contain a stone. In 4 cases, the gall-bladder was sutured and returned into the belly. Of these 1, or 25 per cent., died as the direct result of the procedure, as against 8 deaths out of 31 cases in which the viscera was stitched to the wound, the mortality being 22.58 per cent. In the case of the surgeon mentioned by Tait, the sutures appear to have given way and permitted the escape of bile into the peritoneal cavity. That suturing the bladder is not so dangerous as Tait assumes is shown, not only by the comparatively insignificant rate of death, but by the case of Meredith, in which, on death from suppression of urine, the stitches were all right, and the gall-bladder contained nearly eight ounces of bile. Were he himself called upon to do the operation, he would certainly employ sutures and return the organ.

In 6 cases the gall-bladder has been excised, 5 times by Langenbuch, and once by Courvoisier. One of Langenbuch's patients died, because of the existence of an ulcer in the cystic duct, which was overlooked on account of the presence of large masses of fat, which permitted the bile to escape into the peritoneal cavity. Hence, the mortality of cholecystectomy is 16.66 per cent., or 6.19 per cent. less than that of cholecystotomy, which shows that is not so absurd a procedure as Tait declares it to be. Finally, in 1 case Von Winiwarter successfully established a communication between the duodenum and the gall-bladder. This operation, or cholecystenterostomy, has not been repeated on the human subject, although Dr. Gaston, of Atlanta, has experimented with it on dogs.

In the present state of our knowledge, based upon the foregoing data, he would prefer cholecystotomy in recent cases, but would not hesitate to extirpate the gall-bladder if its coats were ulcerated, or if ulceration were threatened.

DR. J. EWING MEARS next read a paper on

PHOSPHORUS NECROSIS OF THE JAWS,

in which he discussed chiefly the local and constitutional character of the disease, the value of early treatment in arresting it, the value of a certain agent (turpentine) which is antidotal in character, and, finally, the prevention of the disease. After a brief résumé of the history of the disease, he reviewed all the more important conditions that have a bearing upon the affection and the susceptibility of certain persons to it. This susceptibility varies greatly with different individuals. A majority of the employés of match factories are females, varying in age from eleven to twenty. Some of these work only a few weeks, while others are able to endure it for years. Most of the cases are among those in the packing-room. The effects of phosphorus on the system were also described at some length. Very few of the symptoms given as the physiological or toxicological effects of phosphorus were found at all prominent in these cases. Beyond the evidences of bronchial and conjunctival irritation, none was prominent. Constipation was more frequent than diarrhœa. No aphrodisiac effects were observed, and no change in the menstrual flow. Pain over the liver, nausea, and sick headache, are described by many, while well-defined catarrhs have not been noted. One of the primary effects of the poison is the disintegration of the red blood-corpuscle and the fatty degeneration of the blood-vessel walls. With this degeneration of the walls, the liability of the poison to affect the periosteum and the mucous membranes is great. He had seen hemorrhages from mucous membranes that appeared blanched and bloodless. Professors von Bieber and Geis, in 1847, concluded, from original experiments with phosphorus on rabbits, that the poison must come into direct contact with the periosteum in order to produce necrosis, and that those free from carious teeth were free from the disease. The last opinion, he received with some hesitation, because he had seen persons with carious teeth who were not affected after long exposure; persons who had had teeth extracted without ceasing their employment and without the development of the disease, and in the case previously referred to the disease did not develop until three months after the exposure had ceased. The only early symptom was the feeling, on the part of the patient, that his teeth were lengthened. Importance was placed upon the accumulation

of tartar about the necks of the teeth, and its penetration below the surface of the gums, resulting in constant irritation. This irritation renders the phosphorus more likely to attack the alveolus, especially upon exposure to cold or wet. Comparing the effects of phosphorus and arsenic necrosis, he pronounced the former local, the latter general.

The repair from phosphorus necrosis varies with different cases. Usually it pretty completely envelops the necrosed bone and encroaches well upon the articulation. In one case, in which operation was refused and the disease went on for six years, the sequestrum was completely enveloped by the new bone. But the permanent character of the new bone formation has been called into question by Mr. Salter, who claims that sooner or later the new bone will be absorbed. While absorption sometimes occurs, he did not think it necessary, and believed that its occurrence depends to some extent upon the time at which, and the method by which the sequestrum is removed. Although it would seem that the pressure of dentures upon the new-formed bone would hasten its absorption, this is not the case, but rather the reverse. The frequency of the disease in the lower jaw as compared with the upper, he attributed to the difference in histological structure and blood-supply of the two bones. Further, his experience had been the reverse of that of Mr. Heath that phosphorus necrosis is less frequent in cancellous bones than in compact ones.

The symptoms of the disease are at first intermittent, but soon become continuous. The first and second stages soon pass, giving way to the suppurative stage. In that stage, the teeth become loose, and pus exudes from the alveoli; the gums become detached, and the alveolar border becomes visible. The discharge is of a very offensive character. In the lower jaw, the pus usually burrows to the most dependent poin , discharging at the lower margin of the jaw, and in one case it was discharged at the lower margin of the clavicle. When the condyle of the jaw is affected, great pain is experienced in the ear. The difficulty of taking food, the pain occasioned by the attempt to do so, and the swallowing of the offensive discharges all tend to deteriorate the health of the individual, and unless interference is made death may occur.

The treatment divides itself into primary, intermediate, and secondary. It is rare that the patient presents himself for primary treatment. The treatment, however, relates to the condition of the teeth, and the administration of antidotal remedies. Teeth too much diseased to be saved should be extracted, others should have temporary fillings until able to bear permanent. The gums should be bathed in alcohol, tincture of myrrh, phenol, etc. The vapor of turpentine is reputed to overcome the effects of the vapor of phosphorus.

When the stage of suppuration has developed, cleanliness should be enjoined and solutions of iodine and carbolic acid should be thrown around the parts. Also a 7½ per cent. of iodoform gauze should be used to receive the discharge, and to prevent its mixture with the secretions of the mouth. Poultices and warm applications should not be used, and nothing should be done to retard the growth of new bone. The sequestrum should not be removed unless the necrotic action has ceased and the development of new bone has reached a stage sufficient to retain the shape of the jaw. The sequestrum should be removed from the mouth, care being taken not to fracture or tear away the lamellæ of new bone. After removal of the sequestrum, the cavity should be filled with a 7½ per cent. of iodoform gauze. The strength of the patient should be maintained with iron and quinine and concentrated food. The prevention of the disease should be accomplished by control of the employé. The emission of the fumes of phosphorus should be prevented as much as possible, and they should be removed as quickly as possible. The vapor of turpentine should be employed either in large baths or in small reservoirs suspended around the neck of the workmen. In addition to this, cleanliness and frequent inspection of the teeth should be enforced.

DR. E. M. MOORE inquired whether phosphorus necrosis differed materially from ordinary necrosis of bone, and whether in young cases the articulation escaped. He asked further how long the speaker had been accustomed to wait for the formation of new bone before operating; if much contraction of the arch occurred; and whether when the bone removed includes the joint, a useful articulation was formed by the regenerative process.

DR. MEARS replied that his attention had never been called directly to the first question. In regard to the second, all his patients had been of such an age as to represent the adult formation of bone, and that the joint was therefore involved. The period of time that should elapse before operation varies with the case; as a rule, at least four months are required for the new bone to become sufficiently firm. Contraction of the arch is not to be feared except where the entire jaw is removed. To prevent this, it is advisable to remove only one side of the jaw at a time, waiting until that side has become firm before attacking the opposite side. The new joint is, as a rule, perfect so far as function is concerned.

DR. MEARS next exhibited an *Apparatus for the Inhalation of Ether*, the advantages of which were the regularity of the flow into the cone, and the ease with which the ether could be disengaged by heat.

Some miscellaneous business having been transacted, DR. MOSES GUNN, President-elect, was conducted to the Chair, and he accepted the presidency in a few words expressive of his gratification at the honor, and his sensibility of the importance of the position.

DR. W. T. BRIGGS, in retiring from the Chair, congratulated the Association on the success of the session, which he then declared adjourned.

LOUISIANA STATE MEDICAL SOCIETY.

Annual Meeting, held at New Orleans, April 21, 22, 23, 1885.

(Specially reported for THE MEDICAL NEWS.)

(Concluded from p. 508.)

APRIL 23D, THIRD DAY.—MORNING SESSION.

MISCELLANEOUS BUSINESS.

THE Secretary read a communication from the Rapides Medical and Surgical Association, asking the Society to hold its next meeting at Alexandria, and one from the

Bienville Association, requesting the Society to meet at Arcadia. These communications were referred to the Nominating Committee.

DR. TEBAULT moved that a Nominating Committee, to consist of one member from each Parish represented, be formed. Carried.

DR. LYON moved that "the thanks of the Society are due, and are hereby tendered our Recording Secretary, Dr. P. B. McCutchon, for his faithful performance of his duties during the past two years." Adopted.

THE COMMITTEE ON NECROLOGY

reported the death of four valued members of the Society during the year 1884.

In Ascension, Dr. A. C. Love, July 29; in De Soto, Dr. R. T. Gibbs, in July; in New Orleans, Dr. J. C. Faget, December 9; and, lastly, Prof. S. M. Bemiss, M.D., in whose death on November 17, the profession of this State and of the country at large mourns the loss of one of its most eminent and gifted members; distinguished as a teacher, as a sanitarian and philanthropist, as well as for his learning and social qualities, which endeared him to friends and acquaintances.

DR. M. SCHUPPERT read extracts from his paper on the *Physiological Action of Chloroform*, with experiments on animals.

THE NOMINATING COMMITTEE

presented the following report, which was adopted:

President.—Dr. Samuel Logan, of Orleans.

Vice-Presidents.—Dr. E. S. Lewis, Dr. C. J. Bickham, Dr. T. J. Woolf, Dr. A. A. Lyon, Dr. William Kelly, Dr. O. P. Langworthy.

Annual Orator.—Dr. H. D. Bruns.

Place of Meeting.—New Iberia.

DR. RUDOLPH MATAS then read a valuable paper on

THE NATURE OF THE CONTINUED FEVERS OF LOUISIANA WHICH RESIST QUININE.

In Austria, Germany, and France, where malaria is not especially prevalent, the indiscriminate use of quinine is, to say the least, extravagant, quinine being administered in those countries not so much as a specific or antidotal agent, but simply as an antithermic. The immediate use of quinine at the onset of an obscure fever of low temperature would there be censurable, but in Louisiana, where malarial fevers of an insidious and malignant character so extensively prevail, the object of the therapeutist is not so much to lower a temperature, that might be insignificant in itself, but to prevent any further development of pyretic phenomena by antagonizing or neutralizing the poison—the paludal poison, which might be acting as the pyrogenic agent. Hence, Dr. Matas held that the teaching of Nothnagel was not applicable to Louisiana and other malarious countries, and that the general practice of immediately prescribing quinine at the onset of a fever of obscure etiology was safe and correct.

Dr. Matas stated that his aim was to discuss those pyretic states in which it was comparatively worthless as an antipyretic.

These conditions might be classed in the order of rebelliousness as follows: 1. Yellow fever; 2. Typhoid fever; 3. The so-called typho-malarial fever; 4. Dengue; 5. The so-called "continued malarial fever;" 6. The simple continued fever; 7. The malarial remittents with organic complications or "bilious fever."

After a cursory review of the etiological factors in these diverse pyrexiæ, he concluded that the reason why the cinchona alkaloids fail to produce any effect is simply due to the fact that in each one of these conditions the causative factors are agencies which are not neutralized or antidotally affected by the alkaloids, the beneficial action of quinine being specifically restricted solely to cases of uncomplicated malarial fevers.

The major part of the paper was devoted to the study of the so-called "continued malarial fever," which was recognized under various confusing and misguiding appellations by practitioners. In this condition, which he regarded as an absolutely independent entity, quinine is a thoroughly impotent agent. The differential diagnosis between this fever and typhoid and malarial fevers was elaborately treated and copiously illustrated by graphic thermometric observations. Special stress was laid in the absence of enteric and ataxic symptoms in this condition as differentiating it from typhoid. Quinine had been administered, thirty grains per diem, in many cases for one week with the view of testing its relations to malaria, but no effect whatever had been produced. The new antipyretics, salicylate of soda, kairin, and especially antipyrin, had been tried with remarkable antithermic results, the numerous charts presented by Dr. Matas attesting to his observations. The fever, however, was never arrested in its course, an abnormal elevation of temperature persisting, during two, three, four, and five weeks, but under the vigilant administration of the antipyretics and a supporting treatment, the dangerous effects of excessive tissue change had been greatly eliminated. The prognosis is favorable in all the typical cases of the continued fever.

The great difficulty in the differentiation of this fever from the malarial fevers at the beginning of a case, is the lack of a positive differential test. Periodicity is certainly no criterion of malaria; the blood morphological changes which are special to malarial poisoning which may furnish a microscopical test for this agent, are practically valueless at the most needed moments. The inoculations recently performed by Gerhardt, Ciarrochi, Mariotti, and other Italian observers, may perhaps furnish a future test for the malarial poison, but this is highly improbable.

The quinine or therapeutic test, though imperfect, furnishes clinically the readiest and most practical means of determining the nature of a case. After prolonged observation, the speaker believed that, as a general proposition, it is safe to assume that any essential fever (a fever free from organic complications) which remains unaffected after a thorough and systematic administration of quinine, is not a malarial fever.

In conclusion, it was stated that more accurate and detailed observations are needed to complete the satisfactory study of the fevers of this section. The word "malaria" is repeated too frequently in our medical vocabulary; and appears too often in our diagnoses. It is a convenient word, but, like the *regnum protisticum* of some naturalists, it serves merely to designate a

scientific *limbo* wherein numerous species are patiently waiting redemption.

DR. AUSTIN then read a paper on the *Inversions of the Gravid Uterus.*

EVENING SESSION.

The second Wednesday in April, 1886, was selected as the *time for the next meeting.*

The newly elected President announced the new Committees, and after passage of appropriate resolutions of thanks, the Society adjourned to meet in New Iberia, La., on the second Wednesday in April, 1886.

NEWS ITEMS.

CANADA.

(*From our Special Correspondent.*)

TORONTO GENERAL HOSPITAL.—During last winter's session, four hundred and fourteen students have been attending the practice of the Toronto Hospital. The average daily number of in-patients was over two hundred. Special gynecological wards have been lately opened under charge of Drs. Temple and U. Ogden. The training-school for nurses in connection with the hospital is in a prosperous condition, and has thirty-four pupils.

SUMMER SESSIONS.—The tenth summer session in connection with McGill University opened on the 13th of April, and continues for three months. The courses are mostly practical, and given in the Montreal General Hospital. This year the two rival schools in Toronto have combined to form a teaching faculty for the summer session in the Toronto General Hospital. All the lectures will be given in the hospital. The session begins on May 1st, and lasts ten weeks.

YELLOW FEVER INOCULATIONS.—We are indebted to DR. DOMINGOS FREIRE for a copy of the *Rio News*, of April 5th, in which he publishes the following important statement concerning his yellow fever inoculations.

With the intention of giving your readers some ideas which I trust will be of interest, relating to the inoculations practised in the city with the attenuated liquid culture as a prevention against the dangers of contracting yellow fever and of which I have by order of the Imperial Government the charge, I beg to give you the following details.

Having had printed in different languages (Portuguese, German, Spanish, Italian, French, and English) notices relating to the subject, of which the enclosed are specimens, after their distribution in the most conspicuous and convenient parts of the town and in places where they in all probability would be useful, I gave the necessary instructions to my assistant, Mr. Charles Browne, to proceed with the work.

From December 22d last year, up to March 22d instant, or in the period of three months, 1109 persons of different nationalities, and whose ages ranged from one month to sixty years, were submitted to subcutaneous injections in the deltoid region of the arm with the said liquid. All, with the exception of one or two cases, experienced elevations of temperature varying from 37.5° C. to 40° C., *frontal headache*, pains in the articulations, general indisposition, and in some, slight epigastric oppression—symptoms which ceased after twenty to forty hours and without any medical intervention. In many cases these injections were practised in houses where a few hours before deaths had taken place from yellow fever; nevertheless in the cases specified and under disadvantageous hygienic circumstances, not one single serious accident has happened. I beg to add that these inoculations were chiefly performed in my presence and in the company of the two medical gentlemen commissioned by the Spanish government specially to study this disease in Brazil.

Every care has been taken in giving publicity in one of the principal newspapers, as to the names, ages, professions, conditions, residences, time in Brazil, etc., and this will be continued in order to facilitate the necessary examination by those who may be so inclined.

NEW YORK STATE MEDICAL ASSOCIATION. — The second scientific meeting of the Fifth District Branch will be held at the Morgan House, Poughkeepsie, at 2.30 P. M., on Tuesday, May 19, 1885. The following papers will be read:

"Three Cases of Ligation of the External Carotid; in Two, Both Vessels were Tied Simultaneously," by J. D. Bryant, M.D.

"Diphtheria and its Treatment by Calomel," by S. J. Murray, M.D.

"Hypertrophy of the Prostate Gland," by J. G. Porteous, M.D.

"Treatment of Cerebral Hemorrhage and Embolism by the Internal Use of Carbonate of Ammonia," by R. C. Van Wyck, M.D.

"Report of a Case of Rheumatic Metastasis to the Brain, ending Fatally," by C. S. Wood, M.D.

JEFFERSON MEDICAL COLLEGE.— It is understood that Dr. Wm. H. Pancoast has informed the Trustees and Faculty of his intention to resign the Professorship of Anatomy in this school at the expiration of the next term.

UNIVERSITY OF PENNSYLVANIA.—At the Annual Commencement of the Medical Department, held on May 1st, the degree of M.D. was conferred on 108 graduates.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT, U. S. ARMY, FROM APRIL 28 TO MAY 4, 1885.

BYRNE, CHARLES C., *Major and Surgeon.*—Assigned to duty as Attending Surgeon at the Soldiers' Home, D. C., to take effect May 15, 1885.—*S. O. 94, A. G. O.*, April 25, 1885.

DE WITT, CALVIN, *Captain and Assistant Surgeon.*—Upon being relieved by Surgeon Byrne, ordered to report to the Surgeon-General of the Army.—*S. O. 94, A. G. O.*, April 25, 1885.

TORNEY, GEORGE H., *Captain and Assistant Surgeon.*—Assigned to duty at Fort Monroe, Va.—*S. O. 87, Department of the East*, April 25, 1885

ARTHUR, WILLIAM H., *First Lieutenant and Assistant Surgeon.*—Assigned to duty at Fort Niagara, N. Y.—*S. O. 89, Department of the East*, April 28, 1885.

THE MEDICAL NEWS will be pleased to receive early intelligence of local events of general medical interest, or of matters which it is desirable to bring to the notice of the profession.

Local papers containing reports or news items should be marked.

Letters, whether written for publication or private information, must be authenticated by the names and addresses of their writers—of course not necessarily for publication.

All communications relating to the editorial department of the NEWS should be addressed to No. 1004 Walnut Street, Philadelphia.